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I. EDUCATION,

A DEBT DUE FROM PRESENT TO FUTURE GENERATION

ILLUSTRATED IN THE ENDOWMENT OF THE PEABODY INSTITUTE, DANVERS, MASS.

On the 16th of June, 1852, the citizens and sons of Danvers, in Massachusetts, assembled for the purpose of celebrating the centennial anniversary of the town's existence. A vast concourse came together, and the streets were enlivened by music, and rendered attractive by the long-extended procession of company after company, of the old and young, and of both sexes, all striving to contribute to the interest, and share the pleasure of the joyous occasion. After proceeding through the principal streets, they repair to the "Mammoth tent," within which was a bountiful supply of those "creature comforts," which are preparatory to the "feast of reason and the flow of soul." Many sentiments and speeches had already been made, when the attention of the multitude was requested to a letter and sentiment from a long absent and almost forgotten, (henceforward *never to be forgotten*) son of Danvers. With the most profound interest, the following letter and noble sentiment were listened to: a letter and a sentiment which honor the heart of him who sent them:—

LONDON, May 26th, 1852.

GENTLEMEN:—I have the honor to acknowledge the receipt of your letter, inviting me to be present at the celebration of the one hundredth anniversary of the separation of Danvers from Salem, on the 16th of June.

I should have the greatest pleasure in joining in your interesting celebration there, if possible. The early associations of my life are clustered around our ancient town. It was, as many of you know, in a very humble house in the South Parish, that I was born, and from the Common Schools of that parish, such as they were in 1803 to 1807, I obtained the limited education my parents' means could afford; but to the principles there inculcated in childhood and early youth, I owe much of the foundation for such success as Heaven has been pleased to grant me, during a long business life. Though my manhood, before coming to Eng-

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land, was spent in Baltimore, (which shares with my native town in my kindest feelings,) I still cherish the recollections of my earlier days, and anticipate, with much pleasure, a visit to the old parish, that I may witness the great strides I am told you have been making in wealth and improvements.

It is now nearly sixteen years since I left my native country; but I can say with truth, that absence has only deepened my interest in her welfare. During this interval, I have seen great changes in her wealth, in her power, and in her position among nations. I have had the mortification to witness the social standing of Americans in Europe, very seriously affected, and to *feel* that it was not entirely undeserved; but, thank Heaven, I have lived to see the cause nearly annihilated, by the energy, industry, and honesty of my countrymen; thereby creating between the people of the two great nations speaking the English language, and governed by liberal and free institutions, a more cordial and kind feeling than has existed at any other time.

The great increase of population and commerce of the United States, the development of the internal wealth of the country, and enterprise of her people, have done much to produce this happy change; and I can scarcely see bounds to our possible future, if we preserve harmony among ourselves, and good faith to the rest of the world, and if we plant the unrivalled New England institution of the Common School, liberally among the emigrants who are filling up the great valley of the Mississippi. That this may be done, is, I am persuaded, no less your wish than mine.

I enclose a sentiment, which I ask may remain sealed till this letter is read on the day of the celebration, when it is to be opened according to the direction on the envelope. With great respect, I have the honor to be

Your fellow townsman,

GEORGE PEABODY.

To MEMRS. J. W. PROCTOR, and others.

The endorsement on the envelope was as follows:—

(The seal of this is not to be broken till the toasts are being proposed by the Chairman, at the dinner 16th June, at Danvers, in commemoration of the one hundredth year since its severance from Salem. It contains a sentiment for the occasion from GEORGE PEABODY, of London.)

It will be easier to imagine than to describe the intense interest which this awakened, and the pleasant astonishment and delight with which the contents of the envelope were received. They were as follows.

A sentiment by George Peabody, of London. EDUCATION,—A DEBT DUE FROM PRESENT TO FUTURE GENERATIONS.

In acknowledgement of the payment of that debt by the generation which preceded me in my native town of Danvers, and to aid in its prompt future discharge, by each successive generation, I give to the inhabitants of that town, the sum of * TWENTY THOUSAND DOLLARS, for the promotion of knowledge and morality among them.

I beg to remark, that the subject of making a gift to my native town, has for some years occupied my mind, and I avail myself of your present interesting festival, to make the communication, in the hope that it will add to the pleasures of the day.

I annex to the gift such conditions only, as I deem necessary for its preservation and the accomplishment of the purposes before named. The conditions are, that the legal voters of the town, at a meeting to be held at a convenient time after the 16th June, shall accept the gift, and shall elect a Committee of not less than twelve persons, to receive and have charge of the same, for the purpose of establishing a Lyceum for the delivery of lectures upon such subjects as may be designated by a Committee of the town, free to all the inhabitants, under such rules as said Committee may from time to time enact; and that a Library shall be ob-

* Mr. Peabody has, subsequently, given for the same object, the additional sum of forty thousand dollars; making, in the aggregate, sixty thousand dollars. He has also increased the Library, by presenting about three thousand valuable volumes, purchased in London, by Henry Stevens, Esq.

tained, which shall also be free to the inhabitants under the direction of the Committee.

That a suitable building for the use of the Library shall be erected at a cost, including the land, fixtures, furniture, &c., not exceeding seven thousand dollars, and shall be located within one third of a mile of the Presbyterian Meeting House, occupying the spot of that formerly under the pastoral care of the Rev. Mr. Walker, in the south parish of Danvers.

That Ten Thousand dollars of this gift shall be invested by the Town's Committee, in undoubted securities as a permanent fund, and the interest arising therefrom, to be expended in support of the Lyceum.

In all other respects, I leave the disposition of the affairs of the Lyceum to the inhabitants of Danvers, merely suggesting that it might be advisable for them, by their own act, to exclude sectarian theology and political discussions, forever from the walls of the institution.

I will make one request of the Committee, which is, if they see no objection, and my venerable friend, Capt. Sylvester Proctor,* should be living, that he may be selected to lay the corner-stone of the Lyceum building.

Respectfully Yours,

GEORGE PEABODY.

No sooner had the reader ceased, than the air resounded with hearty and prolonged cheers for the name of GEORGE PEABODY, the grateful son who had thus decidedly manifested his regard for the home of his youth, and generously discharged his share of the "debt due from the present to future generations." If every individual, every parent, and every community, will act in the spirit of this sentiment, and after the example of this endowment, "then we may hope to see each generation sweep majestically on in an increased and increasing current, each living upon, and growing upon the granaries of the past, and heaping up resources for the future. Then will each succeeding generation more fully develop the true principles of life and action, which will hush the evil propensities of man, and lead him gently by the hand into the paths of virtue and wisdom."

At a meeting of the Town of Danvers, held on the 28th of June, 1852, the gift of Mr. Peabody was promptly accepted, and a Committee was appointed to establish and administer this noble charity, for the purposes, and on the conditions set forth by the donor.

On the 29th of September, 1854, the building erected out of the donation of Mr. Peabody, was formally consecrated as the PEABODY INSTITUTE, to the noble uses of knowledge and morality for which it was designed, by appropriate exercises; and, Hon. Rufus Choate, who commenced his brilliant professional career in Danvers, delivered an address on the occasion, to set forth those uses, and express the grateful appreciation of this public charity "in thoughts that breathe and words that burn."

You have come together to express anew your appreciation of the character and the objects of the giver of this splendid charity; to repeat and republish your

*Mr. Proctor, now deceased, was the man in whose store, Mr. Peabody spent four years of his boyhood, and for whom he entertained the highest respect.

grateful acceptance of it; and, to dedicate this commodious and beautiful structure to its faithful and permanent administration. You open to-day for Danvers,—its inhabitants of this time, and all its successions,—the Lyceum of knowledge and morality. Under this dedication it shall stand while Massachusetts shall stand. This edifice will crumble, certainly, to be replaced with another: this generation of the first recipients of the gift,—the excellent giver himself,—will soon pass away; but, while our social and civil system shall endure; while law shall be administered; while the sentiment of justice, gratitude, and honor, shall beat in one heart on your territory, the charity is immortal.

For every one among you it is set open equally. No fear that the religious opinions he holds sacred will be assailed, or the politics he cultivates insulted, will keep back, any from his share of the diffusive good. Other places and other occasions you reserve for dissent and disputation, and struggle for mastery, and the sharp competitions of life. But, here shall be peace and reconciliation. Within these walls the knowledge and the morality, which are of no creed and no party; which are graceful and profitable for all alike, of every creed and every party; which are true and real to every mind, as mind, and from the nature of mind; and, to every conscience, as conscience, and from the nature of conscience; and, which are the same thing, therefore, in every brain and every heart,—this alone,—knowledge and morality, broad, free, identical as humanity itself,—is to be inculcated here.

Happy and privileged the community, beyond the measure of New England privilege even, for whom such high educational instrumentalities are thus munificently provided, and made perpetual! Happy, especially, if they shall rouse themselves to improve them to their utmost capacity,—if they shall feel that they are summoned by a new motive, and by an obligation unfelt before, to an unaccustomed effort to appropriate to their hearts and their reason all the countless good which is hidden in knowledge and a right life; an effort to become,—more than before,—wise; bright; thoughtful; ingenious; good; to attain to the highest degree of learning which is compatible with the practical system of things, of which they are a part; to feed the immortal, spiritual nature, with an ampler and higher nutrition; enriching memory with new facts, judgment with sounder thoughts, taste with more beautiful images, the moral sense with more of all things, whatsoever they are, lovely, honest, and of good report,—the reality of virtue, the desert of praise.

Happy, almost above all, the noble giver, whose heart is large enough to pay of the abundance which crowns his life,—to pay out of his single means,—the whole debt this generation owes the future. I honor and love him, not merely that his energy, sense, and integrity have raised him from a poor boy,—waiting in that shop yonder,—to be a guest, as Curran gracefully expressed it, at the table of princes; to spread a table for the entertainment of princes,—not merely because the brilliant professional career which has given him a position so commanding in the mercantile and social circles of the commercial capital of the world, has left him as completely American,—the heart as wholly untravelled,—as when he first stepped on the shore of England to seek his fortune, sighing to think that the ocean rolled between him and home; jealous of honor; wakeful to our interests; helping his country, not by swagger and vulgarity, but by recommending her credit; vindicating her title to be trusted on the exchange of nations; squandering himself in hospitalities to her citizens,—a man of deeds, not of words,—not for these merely I love and honor him; but, because his nature is affectionate and unsophisticated still; because his memory comes over so lovingly to this sweet Argos; to the school-room of his childhood; to the old shop and kind master, and the graves of his father and mother; and, because he has had the sagacity, and the character, to indulge these unextinguished affections in a gift,—not of vanity and ostentation,—but of supreme and durable utility. With how true and rational a satisfaction might he permit one part of the charitable rich man's epitaph to be written on his grave-stone: "What I spent, I had; what I kept, I lost; what I gave away, remains with me."

The speaker thus enunciates the educational character of the institution founded by the liberality of Mr. Peabody.

"I take it for granted that the declared wishes of Mr. Peabody will be considered

as determining, quite peremptorily, the general mode of administering this fund. Better educational instrumentalities, indeed, no man's wisdom, in the circumstances, could have devised. Courses of lectures, then, and a library of good books, these are to form the means of the Lyceum; and, the problem is, in what way you can make the most of them.

It may seem a little exaggerated at its first statement, and, perhaps, alarming, but it will serve, at least, to introduce my more particular ideas, to say that the *true view for you to take of this large provision of mental means, and of your relations to it, is to regard yourselves as having become, by its bestowment, permanently the members of an institution which undertakes to teach you by lectures and a library.* Herein, exactly, is the peculiarity of your new privilege. You are no longer, as heretofore it has been with you,—merely to be indulged the opportunity of a few evenings in a year to listen, for the amusement of it, to half a dozen discourses of as many different speakers, on as many totally disconnected topics; treated, possibly, for ostentation, and adapted only to entertain; but, however treated, and whatever fit for, totally forgotten in an hour; preceded, followed up, and assisted, by no preparation and no effort of the hearer; giving no direction whatever to his thoughts or readings; separated from each other, even while the Lyceum season lasts, by a week of labor; devoted, even in its leisure moments, to trains of thought or snatches of reading wholly unauxiliar and irrelevant; and, for nine months or ten months of the year, totally discontinued. Thanks to this munificence, you are come to the fruition of far other opportunities. *An institution of learning, in the justest sense of the term, is provided for you.* Lectures are to be delivered to you through a far larger portion of the year; a library, which will assuredly swell to thousands of volumes, is to be accumulated under your eye, from which you may derive the means of accompanying any lecturer on any subject from evening to evening; and, this system of provision is permanent,—henceforth part and parcel, through its corporate existence, of the civil identity and privilege of Danvers. You enter, therefore, to-day,—you may enter,—a new and important school; as durably such, as truly such,—having regard to differences of circumstantial details,—as the seminary at Andover; or the law school at Cambridge; or the College of Medicine at Philadelphia,—all of them schools, too, and all teaching by lectures and a library.”

It does not fall within the scope of this article to follow the eloquent speaker in the development of the true idea of the public lecture, designed to impart knowledge; and of the manifold uses of books in mental culture, and the highest enjoyment to the man of labor as well as of leisure. From those portions of the address we shall enrich our pages by extracts hereafter. After a touching allusion to his own use and enjoyment of good books, Mr. Choate concludes as follows:—

“To these uses, and these enjoyments; to mental culture, and knowledge, and morality,—the guide, the grace, the solace of labor on all its fields, we dedicate this charity! May it bless you in all your successions; and, may the admirable giver survive to see that the debt which he recognizes to the future is completely discharged; survive to enjoy in the gratitude, and love, and honor of this generation, the honor, and love, and gratitude with which the latest will assuredly cherish his name, and partake and transmit his benefaction.”

As an additional encouragement to the youth of Danvers to improve their privileges, Mr. Peabody has signified his intention to give the sum of two hundred dollars, annually, to be appropriated for the purchase of prizes for the meritorious pupils of the two High Schools, known as the Peabody and Holton Schools. In furtherance of this design, the School Committee of Danvers have had executed a beautifully designed medal, called the PEABODY MEDAL, to be awarded to the deserving members of the schools.

But the munificence of Mr. Peabody has not been restricted to the noble institution which will perpetuate his name, or to the schools where he was educated, or the town where he was born. It is yet too soon to speak of all his benefactions; and long may it be before those who follow him, will be called on to make up the record of his uses of great wealth acquired by commercial sagacity, probity, and diligence. When that record is written, it will be found that his liberal hand has bestowed largely to provide for the widow and orphan, bereaved by pestilence, and for the poor, rendered houseless by fire, in cities which he never visited. When the credit of his adopted state of Maryland was not properly protected in Europe, his princely interposition redeemed her bonds from dishonor. The Industry and Arts of his native land, will not forget his timely advances of many thousand dollars, that rescued from entire failure the American department of the London Exhibition. Science and humanity will unite in associating his name with that of Grinnell, as the generous patron of discovery in unexplored regions, and of search after the hardy navigator, whose fate had touched the heart of all Europe. And while he has contributed to rear in the capitol of his country, a monument to the memory of Washington, his large hearted patriotism has exalted in the city of his residence, the anniversary of American Independence from a national festival, to a fête of Liberty and Fraternity, which the friends of civil and religious freedom, whether born on American or English soil, may unite in celebrating.

NOTE.—The London Morning Journals, of the 5th of July, 1855, contained an extended notice "of an entertainment given by Mr. Peabody, as is his custom, on the 4th of July, the Anniversary of American Independence, to his countrymen sojourning in London. Among his two hundred guests were, his Excellency, Mr. Fillmore, late President of the United States, and several English gentlemen of distinction." Hon. Josiah Quincy, Jr., of Boston, like his ancestor bearing the same name, eighty years before, was there "to establish a personal intercourse with the friends of constitutional liberty on the English side of the water," and at the same time to express in the most felicitous manner, his own and his countrymen's pride, in the recollections and associations of the day. Sir J. Emerson Tennent, Vice President of the Board of Trade, responded eloquently to a toast expressive of a desire for a "perpetual friendship and alliance between the people of England and the United States," which he believed was the predominant feeling of his own countrymen. "We look to you to speed the torch of freedom, lit at our shrines, over your own continent, until its broad illumination shall flash across the Pacific, and penetrate the dark recesses of Asiatic despotisms."

"Take freedom, take thy radiant round,
When dimmed, revive,—when lost, return;
Till not a shrine on earth be found,
On which thy glories shall not burn."

The festivities were closed, with Mr. Fillmore proposing the health of Mr. Peabody—"our generous host,—who maintains on British soil, the characteristics of his country, and cherishes for her fond recollections, which he has munificently illustrated on this day of our national independence."

II. EDUCATION AMONG THE HEBREWS.

AN INTRODUCTORY SKETCH.

BY REV. MORRIS J. RAPHAEL, PH. D.

THE Hebrews are emphatically the *people of the book*. Education is to them like the air they breathe: without it they cease to exist. Not only has every Hebrew, like his Gentile competitor in the battle of life, to acquire that amount of instruction, without which he could not successfully carry on his profession or trade: but the minute and manifold observances enjoined by his religion, and the fact that his worship, private as well as public, is conducted in Hebrew, render it necessary that he should likewise obtain some knowledge of the language and literature of his forefathers.

According to the pious legends of the Rabbins, public schools existed before the deluge; and Adam was not only the first man but also the first schoolmaster, assisted in his labors by Enoch, and succeeded by Noah. After the deluge, Shem* established and presided over a public school, assisted by his great-grand-son Eber, among whose pupils the patriarchs Abraham and Jacob, are particularly mentioned.

Another tradition avers that during the bondage in Egypt, the tribe of Levi, although grievously oppressed like all Israel, remained exempt from hard labor, as the whole tribe devoted itself to study and education. That, consequently, this tribe—possessed of higher mental training than the others—disdained to join in the worship of the golden calf; and that from the same cause this tribe was qualified to assume the duties of ministers and teachers, which subsequently were entrusted to them.

The Pentateuch gives us no information as to the system of education which the practice of its precepts rendered necessary. The duty of parents to teach their children is repeatedly inculcated. The art of writing is assumed to be possessed by the priests (Numbers v. 23,) and also by the people generally, (Deuter: vi. 9, xi. 20, xxiv. 1, 3,) and it is remarkable that the only ornament on the high priests' mitre, consisted of a golden frontlet on which alphabetic characters were

* Scipio Sgambatti in his work "Archivorum Veteris Testamenti, seu de Scripturis Hebraicis," asserts that Shem was the author of a treatise on medicine, of which a manuscript in Hebrew was preserved in the library of the then (A. D. 1600) Elector of Bavaria!

engraved. But the books of Moses nowhere speak of a class of men, or of any public institution, altogether devoted to teaching. It may be assumed that education was looked upon as a religious duty, and therefore entrusted to the priests and Levites. It is certain that in process of time these teachers neglected their duty to such a degree that Samuel found it necessary to introduce a new and enlarged system. He therefore founded the schools of the prophets open to all Israelites. Respecting the internal polity, and the system of education in these schools we know but little. We must, however, not suppose that the Hebrew word *Nabi*, "prophet," bore the same signification in the days of Samuel that it obtained at a later period of Scriptural history, viz., that of an "inspired predictor of future events"—such an inspired predictor in the days of Samuel was called *Ro-eh*, or *Hhoseh*, "a Seer," (1. Sam. ix. 9,) whereas the word *Nabi*, "prophet," is used in Genesis xx. 7, and in Isaiah ix. 15, to designate a "teacher;" in Exodus viii. 1, an "orator;" in Exod. xv. 20, and Judges iv. 4, a "poet," and in 1. Chronicles xxv, *passim*, a "composer of music." This fourfold meaning of the word *Nabi* tells us what functions the "prophets" trained in these schools were intended to discharge. They were to be "teachers," "public orators," "poets," and "composers of sacred music," and the system of education was arranged accordingly.

These schools took root, spread over the land and exercised a marked influence on the minds of the Hebrews. Learned societies are spoken of as "the men of Hezekiah," (Proverbs xxv. 1,) and "the masters of assemblies," (Eccl. xii. 11,) which are supposed to have been connected with these schools. With the fall of the Hebrew monarchy, however, these schools were ruined, and shortly after the return from Babylon, they altogether disappear. As it had been in the early periods of the Israelitish commonwealth, the priests,*—who had returned from exile in greater numbers than the Levites—once more became the teachers of the nation, and once more sacrificed their duty to their interest, for which they are bitterly upbraided by the last of the Prophets, (Malachi ii, 1-12).

Ezra, though himself a priest, and "the men of the Great Assembly," over which he presided, again resorted to the plan of Samuel. Public schools of different degrees were everywhere established; the priests no longer remained *ex officio* sole instructors of the people, but were superseded by a new class of teachers, the "Sopherim," *grammaticis* "scribes." Thenceforth the history of education among

* According to Ezra (ii. 36-43), the number of priests that returned, was 4279, while of Levites there only were 311.

the Jews stands clearly before us. Each town in Judea, containing a certain number of inhabitants, was bound to maintain a primary school, the *Hhasan* "precentor," of the Synagogue, in most instances, being the teacher. Seminaries of a higher grade were presided over by *Sopherim* "scribes," and a sufficient annual income was assigned for their support. The portion of public revenue set apart for this purpose, though frequently diverted, was as frequently restored to the schools. In the countries between the rivers Euphrates and Tigris, where the Jewish population was more numerous and wealthy than in Judea proper, and in Egypt, chiefly at Alexandria, the schools were flourishing; and that they were well conducted is proved by the fact that within fifty years from the time the Jews first came in contact with the Greek language, they were able to translate the Pentateuch, from the Hebrew, which had ceased to be their vernacular tongue into the Greek,* with which they had so lately become acquainted.

With the fall of Jerusalem, (A. D. 70,) the schools in Judea were, for a time, ruined. One college, at Jamnia, had, however, been spared by the Romans, and became the center of instruction to the Jews, under the altered circumstances of their religious and civil polity. When this college, and also the schools in Egypt, were destroyed during the wars against Trajan and Hadrian, (A. D. 116 till 134,) a new seat of learning arose at Tiberias, near the lake of that name. The presidents of this school were styled *Nassi*, "prince," recognized by the Roman authorities as Patriarchs, and exercised great sway over the Jews throughout the Roman empire. Under their auspices, the important compilation of the Jewish canon law, called "*Mishna*," was formed about A. D. 200; but their dignity and usefulness gradually decayed, owing partly to the degeneracy of the hereditary Patriarchs, and partly to the hostility of the Christian church. The school was closed about the year 439, when its declining fame had long been eclipsed by the Babylonian schools of Sura, Pumbeditha and Nahardea, near the Euphrates. These great collegiate institutions possessed vast endowments, and were visited by Jewish students from all parts of the world. The great compilation of the Babylon Talmud in twelve large folio volumes, the work of sixty years, attests the zeal and extensive erudition of the *Rishi Me-thibla*, "chiefs of the schools," who under the *Rish Gelutha*, "prince of captivity," taught in these academical republics. They continued to flourish till the year 1048, when the poverty-stricken Caliphs seized on the endowments, and shut up the schools.

* The Septuagint, or translation of the Seventy, was undertaken by Judeans, about the year 280, B. C. E.

Some sixty years before this catastrophe, the Jews residing on the Spanish peninsula, under the dominion of the Moors, had begun to found schools on an enlarged principle, in which the positive sciences, and the philosophy of Aristotle were taught, as well as the Talmud, and which exercised great influence on science and learning, throughout Europe, during the darkest period of the middle ages. These schools continued to flourish till the expulsion of the Jews from Spain, by Ferdinand and Isabella, A. D. 1492.

Contemporary with these Spanish schools, but conducted on more narrow principles, were the Talmudic schools, from which all other studies remained excluded. Their principal seat was in France. From thence they spread first over Germany, and then over Poland, where they still flourish, and from whence the Talmud schools throughout the East have been revived.

The Spanish schools, after their expulsion, sought shelter in Italy and the Turkish empire. In this last-named country, however, they have been absorbed by the Talmudists, who, together with the Cabalists, still reign supreme. In Italy, and subsequently in Holland, the Spanish schools remained active, until they gradually became amalgamated with the modern system which, since the beginning of the present century, prevails throughout the West. (Germany, Italy, France.) In Great Britain, and in the United States, Jewish education is still in its infancy.

An examination of Education among the Hebrews thus presents us six post-Biblical developments :

1. The Schools of the Sophirim.
2. " " " Mishna.
3. " " " Talmud.
4. " Scientific Talmudic schools of Spain.
5. " rigidly Talmudic schools of old France, transplanted to Poland and the East.
6. The modern schools of Germany, Italy, and France.

II. PROGRESS OF EDUCATIONAL DEVELOPMENT IN EUROPE.*

BY HENRY P. TAPPAN, D.D., LL.D.,

Chancellor of the University of Michigan.

WITH some solitary thinker, most probably, the circle of human thought began. The mystery and the beauty of the world led to philosophic inquiry, and creative art. The conceptions and theories started, the truths gained, the work of useful improvement, or, of beautiful art attempted, attracted others as if a new oracle had become vocal. Institutions to make scholars and artists there were not; but scholars and artists had first to grow from the individual teacher; and then, as they multiplied, they became associated in schools and institutions. These, by a concentration of mind and means, multiplied scholars and artists more rapidly, gave them greater perfection by methodical culture and the influence of example, and spread wide the scholarly and artistic spirit.

There are three stages of learned and artistic association to be noticed: The primal, or ancient; the middle, or ecclesiastical and scholastic; and the modern. The first embraces a period reaching down to the time of the establishment of the religious houses of Christianity; the second embraces the middle ages down to the reformation; and the third begins with the reformation. Each stage prepared the way for the succeeding; and each has its marked and peculiar characteristics.

The primal stage is that where the individual thinker, or artist, becomes the centre of a school. Thoughts of God—the great first cause—of the constitution of the universe, of human duty and destiny stir in some great original mind, and he speaks out his thoughts wherever he can gain a hearing—in the public walks and groves, in the market place, in the houses of friends, in familiar intercourse, or on festal occasions. Thus Socrates and the Stagyræ taught. Those who habitually consorted with them became disciples, in turn to become teachers, or to carry out the great principles with which they became imbued, into public life. School, which now generally means an institution of learning, derived from the Greek *σχολη*, that is, leisure or time removed from public or private business, was applied to

* Portion of a Discourse delivered before the American Association for the Advancement of Education, in New York, on the 29th of August, 1855.

designate the teacher and his disciples, and finally his peculiar doctrines. The bustle, interests, and employments of ordinary life were laid aside for a simple and pure devotion to thought, for inquiries after the True, the Good, and the Beautiful. Thus sprung up all the great schools of ancient philosophy; thus were men taught wisdom; thus was human culture carried on; thus were laid the foundations of all knowledge and all education. It was a spontaneous association of great minds aspiring after the highest objects that can be proposed to man. The same individuality marks the poets, the artists, the historians, and the orators of antiquity. Each formed himself by individual effort, under the inspirations of his own genius, availing himself of the knowledges which were accessible, studying the examples which were presented, seizing the occasions which were offered, moulding language, and developing forms of beauty with an originality which could belong only to a period when the human mind, awakening to a consciousness of its powers under the great eye of nature, instead of finding authorities in the past, was driven in upon itself and created authorities for the future, and like a discoverer in regions untrodden before, wandered freely abroad in joyful expectation of wonders of truth and beauty.

In the latter period of Greece, and during the classic age of Rome, the Schools of Philosophy, and particularly the Schools of the Rhetoricians exhibit some approximation to the form of institutions of learning, with a formula of education; but still the individual teacher created his own school and formed its centre. Cicero studied Plato and Demosthenes, but he resorted to no university; he was taught by Roscius, but in no public gymnasium. Virgil imitated the *Iliad*, but he caught the epic fire, and gained the majesty and grace of the hexameter from the discipline of no Homeric Institute. In forming an estimate of the learned men and artists of antiquity, we must think of original genius, self-made men, individual efforts, independent thoughts and aims, and the voluntary association of men naturally influencing each other by conversation, correspondence, daily example, and the courtesies of social life. We must forget our modern ideas of educational institutions established by the State, or sustained by patronage and power. In that primal stage, education could appear in no other form, for the idea of education was then in process of development, and the materials of education were accumulating.

And as there were not, properly speaking, institutions of learning, so there was not any system of public and general education. The people heard poems recited by strolling rhapsodists, and by actors in the theatre; they heard histories read at the public games; they heard the orators in the public assemblies; they might listen to the

discourse of philosophers in the public places; and they everywhere contemplated proportion, majesty, and beauty, in the temples and statues which adorned their cities and the seats of religious worship. It was an education through the ear and the eye; through national customs, and religious ceremonies; through legend and story; through monuments of national glory, and the proud associations of places connected with heroic deeds. It was a moulding of the character through sentiments, emotions, and passion, infused and quickened by the objects and incidents of their daily life, where the objects and incidents were created and ordered by the genius, taste, and activity of the presiding minds which dwelt in a higher sphere. Wisdom, beauty, poetry, and music dwelt first of all upon Olympus, thence they descended to dwell at Delphi, and upon the Acropolis: their priests and representatives were a god-like order of men, and, through them, the whole people felt the influence of the heavenly visitation. Such was the beauty, poetry, and heroism of the life of the Greeks, that their mythology seems almost to be established by the facts of their history, so naturally consequential was the one upon the other.

The cultivated class among the Romans assimilated to the cultivated class among the Greeks, and their education proceeded by the same means; but the Roman people never imbibed the Athenian spirit of letters and art, and never reached the Athenian polish and grace. The shadow of Olympus did not stretch itself to the banks of the Tiber. But the Roman, no less than the Athenian, formed a strong national character through legend and story, through the associations of places and proud historical recollections, and through the influence of political institutions.

Education, among the ancients, viewed as a process, was varied, undetermined, independent, often accidental, and strongly individual; and, in its diffusion, took the ease and freedom of social life instead of that cloistered seclusion and disciplinary movement which are so familiar to us. As a result, it presents us men of the highest powers under a noble culture; a civilized people wonderful for thought, imagination, and taste, or a people of stern and lofty nationalism; works in literature and art, which, unsurpassed, if not unequalled, have long since been acknowledged by mankind as models which can never lose their authority, and can never cease to instruct; many important truths in pure science, and valuable researches in physics; and speculations in philosophy, immortal as thought itself.

These solitary thinkers, with their few disciples—these poets, historians, and orators in the simple strength of their genius—these artists, working out the ideal conceptions of their own minds, were the only educators of the day in which they lived, and they have ever remained

the educators of mankind. What would antiquity be without these but a barren waste? We would have a spectacle of the rise and fall of dynasties, the march of armies, the tumult of battle, and the glory of conquest: we might have also useful arts, and commerce, and wealth, leading on a barbaric magnificence. But now that they have passed away, what would they be to us but a story, or a dream—a Babylon, a Tyre, a Carthage, to fill a page of history, but leaving nothing behind to inspire, to elevate, to improve mankind? The very wars of the classic nations have an interest beyond all others, because they exhibit the struggles of civilization against barbarism: they are the heroic defending the true, the good, and the beautiful. The labors of Genius have given immortality to these nations. The poetry, the philosophy, the eloquence, the histories, the splendid works of art still survive. The memory and influence of these nations are imperishable, because they continue to teach us great truths, to hold up before us the most perfect models of literary production and of the beautiful arts, and to inspire us with enthusiasm for intellectual culture and refinement.

The Roman Empire, with its majesty and power, was an impressive spectacle—so was the Persian—so is the Chinese and the Russian. But the Dictators, Triumvirs, and Cæsars of the Ancient Empire, viewed alone, have for us little more interest than the Emperors and Czars of the modern dynasties. Greece perpetuated in Rome—Roman legislation, literature, art, and eloquence—Roman civilization and culture draw forever the heart of humanity towards the city of the seven hills.

And thus, in contemplating this primal period, we are taught at once the great truth, that the life of nations no less than the life of individuals, is important to the world, and survives in the memory and veneration of after times, only as connected with the progress of knowledge, the development of thought, the cultivation of taste, improvement in arts, and, in general, with the advancement of the spiritual interests of man.

In proceeding to the second stage of learned association and educational development, it is necessary to remark that, in a general and rapid review like the present, it is not possible to mark with exactness the transition from one stage to the other. Indeed, in the nature of the case, it must have been gradual, extending through centuries, appearing under different phases, and with more or less distinctness.

First of all, let the distinctive characteristics of the two stages be clearly borne in mind:—the first presents the independent teacher going forth to utter what he conceived to be truths, as he best could, under no legal authority, and connected with no incorporated society

or institution. The philosopher and the poet were equally free, and impelled alike by the simple power of original thought and the inspiration of genius. The Greek, particularly, had every thing within himself. His own language, the most perfect, perhaps, ever used by man, was sufficient for him, and he cultivated no other; and whatever hints he may have received from other nations, through some traveling philosopher, he passed so far beyond them, and exhibited such independence in his thinking, that they are scarcely to be regarded as elements of his system. Such hints have little more relation to Grecian philosophy than the letters of Cadmus to the dramas of *Æschylus*.

In the second stage, there appears the necessity of referring to the past, and becoming acquainted with what the human mind had already successfully achieved. There were cultivated languages to be learned, master works in literature and art to be studied, systems of philosophy to be examined, and scientific truths to be acquired. The Roman could not be as original as the Greek, and had first to become a scholar ere he could be a philosopher, poet, or orator.

The classic period of Rome added still more to the mass of philosophical and literary material, and imposed upon subsequent ages the necessity of a still wider erudition. And when the Latin itself ceased to be a living tongue, or existed only in a degenerated and corrupted form, two classical languages instead of one had to be acquired as the necessary portals to those treasures of thought and beauty which the genius of the ancients had created, and which were henceforth to lead the way of profound and elegant culture.

New and powerful elements of intellectual development had also been introduced with the Christian religion. The great author of this religion taught after the manner of the ancient philosophers, but with a perfection and power which surpassed them all. He taught everywhere—in the temple and in the synagogue, in the highways and in the open fields, or in private dwellings amid the informality of social converse. He taught with the freest method, and used the most familiar illustrations, and yet he taught such doctrines as had never been heard before. He organized no schools; he simply taught. Mightier than the Sibyls, while, like them, he seemed to scatter his truths to the winds, he securely planted them in human hearts, and nursed a power destined to overthrow the old religions, revolutionize social organization, and regenerate the world. With his Apostles, organization began, and the Church was instituted. At first, simple associations, scattered, and more or less independent, appeared. The organization itself seemed a spontaneous growth from the sacred affinities created by a common faith and hope, common dangers and

exigencies, and common duties. From this unostentations beginning arose a vast ecclesiastical system, with a mighty hierarchy, which spread itself over the Roman Empire, and finally took possession of the throne of the Cæsars.

With Christianity, there grew up a new, peculiar, and extensive literature. There were first the sacred writings; then, the epistles, homilies, polemics, and theologies of the fathers. Theology took a two-fold form—the orthodox and the heretical. Both allied themselves to philosophy; the first basing itself upon the sacred writings, called in philosophy as an adjunct authority, and to aid in interpretation and exposition: the second, basing itself upon some favorite philosophy, sought to mould the sacred writings to its dogmas. Christianity, a doctrine of God, of duty, and of immortality, swept over the whole field of philosophy, and connected itself with the profoundest and most momentous questions that can agitate the human soul.

The study of languages, antiquities, philosophy, and rhetoric, seemed involved in the inculcation and progress of this religion. It was, in truth, a great system of teaching, where each society, or church, became a school, and the priest, or minister, a public instructor. And, as copies of the sacred writings were multiplied, readers would naturally increase, and the value of the art of reading be correspondingly enhanced. That education, therefore, should, under Christianity, be diffused among the people, and take the form of institutions, and adopt a determined method, was an inevitable result. Could this religion have preserved its original simplicity and purity, and remained disconnected with pride, ambition, and power, it might, perhaps, in its natural quiet movement, have given birth to a system of universal education, and advanced all sciences and arts, at the same time that it was accomplishing the spiritual regeneration of society. But even as actually developed, we shall see how close and important was its connection with the advancement of knowledge and the rise of institutions of learning.

For centuries before the fall of the Roman Empire, luxury had produced effeminacy with all its attendant vices. The decay of national spirit, of virtue and manliness has ever marked the deterioration of letters and the arts; and thus the fall of the empire was preceded by the disappearance of all that had signalized and graced the Augustan age. But this was the very period during which the patristic literature had been accumulating. And when the barbarians had finally completed their conquest, followed by the almost total loss of classical learning, although the church was not exempt from the prevailing ignorance, still the Latin language was preserved in her

canons and liturgies, and in the Vulgate, so that whatever of learning remained, was found for the most part in the Church.

The leading Ecclesiastics, indeed, cherished the strongest prejudices against secular learning. Gregory I., the founder of papal supremacy, directed all his authority against it, and is even reported to have committed to the flames a library of heathen authors. In some monastic foundations, the perusal of the works of heathen authors was forbidden. Nevertheless, the tenacious adherence of the clergy to the Latin liturgy, and to the Vulgate translation of the Scriptures, and their implicit submission to the Fathers, in preserving the Latin language, preserved the very records of that literature which they neglected and contemned. Another circumstance, too, and that, perhaps, purely accidental, contributed still more to the preservation of classical literature. The order of St. Benedict, so widely diffused through the Church, were enjoined by their founder to read, copy, and collect books, without any specification as to their character, probably presuming that they would be religious books. They obeyed the injunction literally, and classical manuscripts were collected, and copies multiplied.

It thus came to pass that monastic institutions became the great conservatories of books, and the means of multiplying them. It must not be forgotten, too, however we may be opposed to the institution of monasticism, that during centuries of intellectual darkness and barbarism, when war formed the chief employment of men who sought for distinction, the monasteries became the quiet retreats of the gentler and more elevated spirits who wished to escape from the violence of the world, and to engage in the genial pursuits of literature and philosophy. The scholar became of necessity an ecclesiastic. We cannot be surprised, therefore, that schools of learning sprung up under the shadow of convents and cathedrals. One feature distinguished the Church even in the dark ages—let it be remembered to its honor—which peculiarly adapted it to foster the interests of learning, and to raise up learned men; in awarding its benefits, in bestowing its honors, it paid no respect to rank: to it, the noble and the peasant were undistinguished; and from the lowest grades of society might arise the successor of St. Peter, to set his foot upon the neck of Kings and Emperors. Here, then, was opened to the people the possibility of social elevation and power, and here simple genius and learning might hope to escape from obscurity, and gain the loftiest stations.

There is but one parallel case. In the Italian cities, the municipal judges were chosen from among the body of the citizens; and so rapid was the rotation of office, that every citizen might hope in his turn to participate in the government. Now, it is remarkable that

the study of Roman Jurisprudence was revived to such a degree at Bologna, that a famous University sprang up, and the only one that can dispute with the Universities of Oxford and Paris the claim to the earliest antiquity. In both instances, it was the removal of the interdicts which everywhere else debarred the people from all hope of advancement, that quickened the ambition of learning. Nature hath ever her own noblemen whom she will set forward, unless arbitrary institutions prevent.

The first schools, after the barbarians had completed the overthrow of the Empire and of all imperial institutions, were merely of an elementary character, and were established by certain Bishops and Abbots, in the sixth century. These conventual and cathedral schools were probably, at first, designed for neophytes, to fit them for engaging with propriety in the church service. Their benefits, however, were not confined to these. To what extent these schools were multiplied, it is impossible to determine with exactness. They assumed a higher character under the direction of eminent men, such as Theodore, Bede, and Alcuin. Charlemagne invited the latter from England, in connection with Clement of Ireland, and Theodolf of Germany, to establish or restore the cathedral and conventual schools in France. The division of sciences which obtained in them is remarkable. The first was the *Trivium*, comprising grammar, logic, and rhetoric. The second was the *Quadrivium*, comprising music, arithmetic, geometry, and astronomy. Few studied the *Quadrivium* at all; and the instances were rare where the *Trivium* was mastered. The theological aspect which was given even to these studies, is evident from the fact that the study of music was confined to chanting the church service, and astronomy to the calculation of Easter.

Jurisprudence and theology were the two governing powers of educational development, which gave rise to Universities. The latter, however, was the chief, and is mainly to be considered.

Hitherto, two methods of theological discussion had obtained. During the first six centuries, we have the method of the fathers—that of interpreting the Scriptures by their own ability and skill, and by the decisions and traditions of the Church, as these accumulated from century to century. In the eighth century, or, perhaps, earlier, the Fathers were themselves received as authority conjointly with the Scriptures and the decisions of the Church.

But the establishment of cathedral and conventual schools could not but advance human thought. Scholars of more or less eminence were found scattered through the middle ages. Scholars were engaged in founding and perfecting these schools, and gave in them an impulse to study. A taste for philosophical speculation would na-

turnly spring up, and the very study of the Fathers would tend to foster it. The logic of Augustine was in use; this was followed by the logic and metaphysics of Aristotle, although at first opposed by Popes and Councils.

Questions in theology naturally ally themselves to metaphysics; and polemics as naturally call in the aid of dialectics. Lanfranc and Anselm, successively Archbishops of Canterbury, made use of metaphysical ideas as well as of Aristotelian dialectics, in their controversy with Berenger respecting transubstantiation. Now arose a new method of theological discussion; it was no longer a simple appeal to the Scriptures, nor an appeal to the Scriptures, the Fathers, and the decisions and traditions of the Church conjointly. It became now an appeal to Reason also. And yet it was not an independent appeal; but the received dogmas remaining unquestioned, Reason was bent to expound and fortify them. "The principle of the Schoolmen, in their investigations, was the expanding, developing, and, if possible, illustrating and clearing from objection the doctrines of natural and revealed religion, in a dialectical method, and by dint of the subtlest reason. The questions which we deem altogether metaphysical, such as that concerning universal ideas, became theological in their hands."

The founder of the Schoolmen and of the scholastic system, so called from *Scholæ*—the schools which Charlemagne opened, is generally received to be Roscelin, who flourished at the close of the 11th century. He revived the question respecting universal ideas, and with him commenced the celebrated controversy between the Nominalists and Realists. Three names figure at the beginning of this controversy—Roscelin, the Nominalist, William of Champeaux, the Realist, and Abelard, who endeavored to occupy a middle ground. The intense interest awakened by this controversy, and the multitudes who waited upon the discussions, can be explained only by the fact that a new field was opened to the human intellect and the authority of human reason brought in. It was assumed, indeed, that reason should not transcend the dogmas of faith, and there was always professedly a submission of the former to the latter: but the charge brought against the nominalists of subverting the doctrine of the Trinity by reducing it to a mere nominal unity of persons; and the counter-charge brought against the realists, of a tendency to Atheism, prove that there was a freedom of thought and language indulged in by both parties which could not be restrained within the limits of theological precision. The controversy was carried on until the fifteenth century, when, at the Revival of Letters, it gave place to objects and themes more closely connected with the progress of knowledge, and the improvement of the world. Two things were gained, however,

of the utmost importance, and which co-worked to the same end: First, the human intellect was awakened, and a taste for scholarship widely diffused. Secondly, Universities were established.

William of Champeaux opened a School of Logic, in Paris, in 1109. The dialectic skill and the graceful eloquence of Abelard, drew together thousands of eager disciples. In the School of William of Champeaux, was the germ of the University of Paris, for with it commenced a regular succession of teachers. The lectures of Abelard, both when delivered in Paris and at the Paraclete, from the enthusiasm they awakened, and the numbers they collected, were a dazzling exhibition of the power of oral teaching in even the most abstruse subjects. In both there was something like a return to the method of the old Grecian Schools. There was this difference, however: The ancient philosophers belonged to no order, and taught with the utmost freedom. Champeaux and Abelard belonged to the Church, and were presumed never to transcend its dogmas. Indeed, it would not have been lawful for them to teach a pure science, that is, a science uncontrolled by theological ends and aims.

From the time of Champeaux and Abelard, schools multiplied in Paris. The scholastic discussions seemed to have created a sort of dialectic phrenzy. About the middle of the twelfth century, the influx of scholars into Paris was so great that they were, somewhat extravagantly, indeed, said to outnumber the citizens. Philip Augustus was led, sometime after this, to enlarge the boundaries of the city to afford them accommodations. Students flocked from foreign countries. The Faculty of Arts in Paris was divided into four nations: France, Picardy, Normandy, and England. In 1458, there were twenty-five thousand students in Paris. Universities multiplied also in other countries. Paris was distinguished for Scholastic Theology; Bologna for Jurisprudence; Salerno for Medicine. Ten thousand students resorted to Bologna. At Oxford, in the time of Henry III., the number of students was reckoned also by thousands.

Universities became distinct corporations by Royal Charters, and the Holy See threw its protection around them.

But what was the peculiar organization of these institutions? They differed from the Greek Schools in that they were a collection of teachers forming one incorporated society. They differed from the Cathedral and Conventual Schools, in that these were elementary and isolated, while the Universities aimed at the highest developments of knowledge, and were associations for the purposes of learning, embracing multitudes.

The teachers were indifferently called masters, doctors, and regents. The first name indicated that they had compassed the arts, and thence

become Masters of Arts; the second, that they were qualified to teach philosophy; the third, that they had authority to direct education.

The arts comprised the Trivium and Quadrivium, which included together seven branches—Grammar, Logic, Rhetoric, Music, Arithmetic, Geometry, and Astronomy. Philosophy was divided into three branches, and thence called the three philosophies, namely, Theology, Law, and Medicine. A particular university, however, as we have seen, cultivated frequently, in an especial degree, only one of these philosophies.

According to the statutes of Oxford, ratified by Archbishop Laud, there were four faculties in which the University furnished education and granted degrees—Arts, Theology, Civil Law, and Medicine.

Four years attendance on the lectures of the first faculty was required to qualify for the degree of Bachelor of Arts; and seven years for the degree of Master of Arts.

To commence the course in the faculty of Theology, a mastership in Arts was a pre-requisite. Seven years attendance on the lectures qualified for the degree of Bachelor of Divinity, and four more years for the degree of Doctor. In the faculty of Civil Law, a mastership in Arts was not a pre-requisite: but the Master obtained the Bachelor's degree in Law in three years, and the Doctor's in seven; while the simple student was required to attend five years for the first, and ten for the second.

In Medicine, a mastership in Arts was a pre-requisite: and three years attendance on the lectures qualified for a Bachelor's degree in Medicine, and seven for a Doctor's.

Degrees were also granted in particular branches, as in Logic and Rhetoric. In Music, a separate degree is given even at the present day.

The branches embraced by the Arts were multiplied as knowledge advanced. Hence, in the time of Laud, Greek, Natural Philosophy, Metaphysics, Moral Philosophy, History, and Hebrew are specified in addition to the seven arts before mentioned.

In the original constitution of Paris and Oxford, the University was taught and governed by the graduates at large—all the graduates were teachers. Graduation was nothing more nor less than a formal reception into the body of Teachers comprising the University Faculties.

The Bachelor was an imperfect graduate admitted to exercise the vocation of teacher partially for the sake of improvement. Hence, he was said *incipere*, to commence the vocation; and the commencement ceremony was his induction into office.

The Master, or perfect graduate, alone could *regere*—govern or be

a Regent. At first the teachers, or masters, received fees from their pupils. Afterwards, to certain masters, salaries were appointed, and these gave lectures gratuitously. All graduates were obligated to teach during a certain term, and privileged to teach perpetually, also; but their number became so great that accommodations could not be provided for all: nor were the services of all necessary. The term of regency was therefore often abbreviated, and even dispensed with altogether: but the University could compel the services of the graduates, whenever it became necessary to increase the number of teachers. The salaried teachers, too, would naturally take precedence; and these, together with others whom natural inclination and peculiar circumstances led to select the vocation of a teacher, formed a permanent body, who in time were called *Professors*, simply from the fact that they professed, or addicted themselves to certain branches of instruction. Thus Professor, again, became identical with Master, Doctor, and Regent, in designating a certain office. In time the number of professors was limited by statute, and when others besides the regular professors were allowed to teach, their powers and privileges were of a secondary grade.

The Cathedral and Conventual Schools still remained, and other schools of a similar grade came to be established privately, or by endowment. All these were preparatory to the University. The University, we perceive, was from the very beginning an association of learned men, whose great object was the advancement of all knowledge, and of the highest forms of education. Like the schools of the ancients, they came up spontaneously, and were the work of individuals, and not of the State. Like them, too, they gave instruction orally; and the living teacher communicated to his pupils his own original researches and conceptions expressed with the force and freedom of his own style and manner. They were therefore the legitimate successors of the former, and afford a remarkable proof how the laws which govern the development of the human mind and of society preserve their identity through the sweep of ages. The respects in which they differed from the ancient schools were equally legitimate. They became a compact association of schools, because, science and literature, now developed into branches, existing in multifarious works, assuming fixed principles, and represented by acknowledged standards, constituted a defined basis, on which association was possible. The same causes, also, led them to common methods and processes, as educational institutions.

After Universities had come into existence, they received charters from the State, and were placed under the protection of both State and Church; but they ever maintained and exercised, like other cor-

porations, their own rights and powers. They elected their own officers, and adopted their own regulations, as institutions in themselves competent to discharge the great duties they had undertaken. They were not the work of sciolists and empirics. Created by great men, they have ever multiplied scholars, and been the fountains of letters and science, and of modern civilization.

Popular education could not be the starting point of education, for the ignorant masses are of necessity incompetent to plan and adopt measures for their own improvement. Individuals elevated above their age and the people around them, by superior genius, and a peculiar inspiration of thought, called out by circumstances sometimes extraordinary, and often accidental, took the lead. Homer will always remain a mystery; and yet Greek art, letters and civilization must be referred back to his immortal work as their inception. Socrates is a miracle of humanity, and stands alone; but he is the acknowledged father of an undying philosophy. Bacon was the only man to write the *Instauration of the Sciences*, and the *Novum Organum*. Christianity itself—the divine religion, made its advent in the solitary Jesus of Nazareth.

From the solitary poet, philosopher and reformer, proceeds the quickening and regenerating truth, first of all, to be received by the few. Then by association the truth gains power, is widely disseminated, and, finally, permeates the masses of society. Such is the progress of knowledge and education. The first period shows us the solitary gaining the few. The second period shows us the beginning of association preparatory to the universal diffusion of knowledge. The third period is that in which association will be perfected, and the universal diffusion of knowledge take place. In universities we have the association which in the end creates common schools, or schools for the people.

In our country, when attention is directed to the higher institutions of learning, the idea and title of a college always come before us. The title *university* is sometimes used, and not unfrequently is applied where there is not even a fully developed college; but a University, properly speaking, as it does not exist among us, so generally no adequate conception is formed of it; and we are prone to speak of colleges as if all our wants of high and perfect education are met by them alone. But colleges originally were not institutions of learning at all, and are wholly unessential to a university. Their origin was simply as follows: The thousands of students who flocked to the great universities of Europe were accommodated with board and lodging in the halls, inns, and chambers; while the public lectures were delivered at first at the private rooms of the professors, and afterwards

in buildings appropriated to that purpose. Certain streets contained these buildings: Thus, in Oxford, in School street, there were forty buildings, containing each from four to sixteen class rooms: In Paris the four nations of the Faculty of Arts resorted to the Rue de la Foaarre. A scarcity of lodgings arising from the great influx of students, the exorbitant demands for rent consequent upon this, as well as the vices to which students were exposed in large cities, led benevolent and pious individuals to establish colleges where board and lodging were furnished to poor students, and a religious supervision and discipline instituted for the preservation of their morals. Colleges were therefore merely accessories to the universities.

In Italy, colleges never advanced beyond this. In Germany, they advanced very little, and never sufficiently to modify the system of education. Here, too, they have entirely disappeared, the name *Bursch*—given now in common to the students, from the title *Bursar*, originally appropriated to those who inhabited collegiate houses—being the only memorial of them remaining.

In Paris, Regents taken from the University schools were occasionally appointed to lecture in the colleges. This practice in time became so general, that the public rooms were deserted for the college halls. The Theological Faculty confined their lectures almost wholly to the College of the Sorbonne, so that the Sorbonne and the Theological Faculty became convertible titles. In the fifteenth century, the faculty of arts was distributed through eighteen colleges. In the colleges of Paris, however, the faculties of the University always retained the ascendancy, and the University, instead of being superseded, was only divided into parts. Napoleon really restored the integrity of the University. The Sorbonne still remains, but is occupied by the four faculties of Science, Letters, Law, and Medicine. The College of France still remains, but in its courses and appointments is absorbed in the great university system.

In England, the colleges are eleemosynary lay corporations, "wholly subject to the laws, statutes and ordinances which the founder makes, and to the visitors whom he appoints." The College "consists of a head, called by the various names of Provost, Master, Rector, Principal, or Warden, and of a body of Fellows, and generally of Scholars, also, besides various officers or servants, according to the peculiar nature of the foundation." The Fellows are elected generally from the graduates of the college. They are elected for life, if they remain unmarried, or until they accept some other appointment inconsistent with the terms of the foundation. Rooms are assigned them in the college, together with board at the commons. They receive also a stipend varying from thirty pounds or less, to two hun-

dred and fifty pounds, and upwards. No duties appear to be positively assigned them, but as they generally belong to the church, it is presumed, if not intended, that they shall addict themselves to theology. The colleges of England, like those of the continent, were originally "unessential accessories" of the Universities. The Universities existed before they were founded—the Universities must have continued to exist, had the colleges afterwards been abolished. In England, however, a portentous change came over the universities through the influence of the colleges. The result is, that at the present day, the universities exist almost wholly in name, and scarcely exercise any function beyond that of conferring degrees. The instruction has gone into the hands of the colleges, and is conducted by the fellows, while the duties of the professors are nominal. The Universities have, therefore, really retrograded to the state from which they had centuries before emerged, and hence have become again a collection of Cathedral and Conventual Schools. Formerly, they were taught by eminent professors with the freedom and originality of public lectures. Now, they are taught like grammar Schools, by tutors who are often juvenile, who have been elected by favoritism or by chance, and who have generally achieved no distinction, and are unknown to the world of Science and Letters. Hence the English Universities have remained stationary; while continental Universities have reached a higher development, and have entered upon a new and more glorious era of academical existence.

Universities, we have seen, were an advance upon the ancient Schools, in that, they were compact associations of the learned for the two great objects of promoting knowledge, and of determining the method and carrying on the work of Education. In form and aims, they were complete. Hence, they can never be superseded. But we come now to a third period, where begins what we may call the culminating stage of learned association and Educational development.

Universities, we say, as to their form and aims, were complete; but they labored under manifold incumbrances. The spirit of the ancient Schools was more free, pure, elastic and productive than that of the Universities, although they had not reached the proper forms, nor arrived at the conception of universal Education. A union of the two was necessary to a new progress. It was necessary that philosophy should be disenthralled from the Scholasticism; that thought and investigation should be disenthralled from ecclesiastical prescription; and that Scientific method should be disenthralled from the *dicta* of authority, and the true method determined in the spirit of independence.

Three centuries were appropriated to this work, the fifteenth,

sixteenth and seventeenth, which we call collectively, the period of the Reformation, although the Reformation, strictly speaking, occurred in the sixteenth. But the fifteenth was preparatory to the sixteenth, and the seventeenth was the continuation of the preceding century—the carrying out of its spirit.

The taking of Constantinople was the great event of the fifteenth century. This drove the Greek Literati into Europe. They brought with them the Greek language, Greek art, literature and philosophy. The cloistered scholastics of Europe were surprised and fascinated by beauty of form, beauty of poetic conception, imagery and verse, and by the various free and brilliant philosophies of the classic land and the classic age. The dry subtleties of Scholasticism could not abide a comparison with the Socratic dialogues; and the Aristotle of the Schools, in his theological dress, was put to shame and banished as an impostor by the Aristotle who came fresh from his native clime, and spoke his native tongue. And thus Scholasticism disappeared never to return; and Greek philosophy, multifarious and confused, indeed, became, for a time, the universal enchantment.

No less signal, in the sixteenth century, was the destruction of ecclesiastical prescription by Luther, the man of the Reformation. The authority of truth and of God supplanted the authority of the Church.

In Bacon and Descartes, the sixteenth and seventeenth centuries are united. Leibnitz and Locke belong to the seventeenth. Four illustrious names are these. With them, was born the spirit of intellectual independence. They cover the whole field of philosophy. Bacon and Locke were of the sensualistic School; Descartes, of the Idealistic; and Leibnitz attempted to harmonize the two. But they all agreed in rebelling against authority, in proclaiming freedom of thought, and in seeking a basis for science in fact and demonstrated truth alone. The *Novum Organum* of Bacon, particularly, is regarded as introducing that new era of scientific investigation, whose splendid results we are daily witnessing.

It was inevitable that this threefold disenfranchisement should exert an influence upon the Educational System. It was just what was required to perfect it. The progress of knowledge and education exert upon each other a reciprocal influence.—One cannot advance without the other.

There have been just three things accomplished in respect to Education. First, the erection of new associations as complements of the University. Secondly, the perfection of the University system of discipline. Thirdly, the development of a system of popular education.

The first we find in the special associations which have been framed for promoting the Arts and Sciences, such as the Royal Academy of London, the Royal Society of London, the Royal Academy of Berlin, and the Institute of France. Associations more or less approximating to European Academies begin to appear in our own country. The Royal Society of London was established on the plan of Bacon, first, at Oxford, in 1645; eighteen years afterwards, it was removed to London. The Royal Academy of Berlin was planned and founded by Leibnitz. He was its first President, and edited the first volume of its transactions. We call these academies complements to the University for this reason: Composed of the most eminent scholars, they devote themselves exclusively to one function of the University in relation to Science and Art, namely,—investigation and discovery, and add to this the publication of the latest results. This function is thus rendered more efficient, while the University, proper, devotes itself more particularly to the work of Education.

In proceeding to consider the modern development of the University system, we cannot fail to remark that the independent spirit and the freedom of the ancient schools have come to be united with the university organization of the model age, through the threefold disenfranchisement already pointed out; and Education is now conducted in the light of that legitimate philosophy which has taken the place of scholasticism, is no longer burthened by ecclesiastical prescription, and, emancipated from mere authority, has attained the method and aims of a determinate science. We do not say that this revolution is complete and universal; but it has advanced so far in the most illustrious and influential universities, that very perfect models already exist, and the ultimate and complete triumph cannot be far distant.

There are three things to be considered in an educational system:

1. The natural order of the development of the human faculties;
2. The studies best adapted to this order in advancing from one stage to another;
3. How far education should be prescribed as a discipline, and when it should be exchanged for free and independent study, where knowledge is the object, and culture the necessary attendant.

The University relates to the last. The mind is presumed to have received a discipline, by which, having gained an insight into method, it can now freely go out in search of knowledge, and, with wise discrimination, avail itself of the abundant means and appliances provided in the University, quickened and aided by the voice of the living teacher, leading the way in investigation and thought. Examination of books, original investigations, hearing the teacher, and conducting disputations with him—these constitute the employments of the University. Disputation is essential, for it leads to a more perfect ana-

lysis, and clears away difficulties. Socrates' whole method was one of disputation. In some, at least, of the universities of the scholastic age, the Professor was bound to sit after he had delivered his lecture, and hear and answer objections.

Both the ancient schools and the Universities of the middle age had the true method. Both, however, were defective in other respects. The ancients had not properly a preparatory discipline. That of the middle ages was imperfect as to the knowledges taught, and by the want of an orderly and philosophical progress—a progress graduated to the constitution of the mind. It is probable that the introduction of teaching into the colleges was at first induced by the want of a proper preparation for the university lectures on the part of the residents. The ancients, again, were without organization. The middle age had organization, but was without true freedom of thought.

See, now, what has been accomplished in the modern age! I cannot go to England for illustrations, for there has been retrogradation instead of progress. I must, of necessity, go to France and Germany. I will confine myself to the last, for Germany has taken the lead in modern university development. In Germany, we find a science of Pedagogy, and institutions based upon it. Pedagogy is the combined result of a priori psychological determination, of observation and experiment. Psychology gives the mental faculties, and the natural order of their development; observation confirms this; experiment tests studies and method. We do not affirm that pedagogical science is perfected; but we know that it is in progress and has already led to important results. We see these results in the schools preparatory to the university, and in the University itself. The limits of each have been determined, and their proper relation revealed; courses of study have been adjusted to the human faculties, and definite periods of time adjusted to the courses of study. Time and labor are both saved, and all labor is made productive. A boy having gained the usual and necessary rudiments of learning, at some seven or eight years of age, enters upon the preparatory discipline. The whole of this discipline is found in one institution—the Gymnasium. Here classes are graduated, extending through some ten years, embracing what is most needful to learn within that time, what experiment has determined it is possible to learn, and what philosophically considered must constitute the best discipline of the mind up to the period of nascent manhood. Here is no arbitrary four years course, for a degree of Bachelor of Arts, and no arbitrary seven years course for a degree of Master of Arts. These degrees are abolished. In England, the attainment of a degree is the object of the course. In Germany, the attainment of a certain discipline

connected with a certain amount of learning is the object of the course. The degrees were instituted in the scholastic age. They had then a definite meaning—they were accredited diplomas of the public teacher. If the number of years was graduated to the existing state of knowledge, when philology was crude, when science was in its infancy, and when scholasticism reigned supreme, with what propriety can that number be retained now, when all is changed, and we have a new age of letters, science and philosophy? But the graduation had not even this merit; on the contrary, it was purely mystical. Seven was the sacred number; hence, seven was made to embosom the arts, and to express the years for their acquisition. If the mystical number of arts be discarded, why retain the mystical number of years? And we may ask, too, why retain the degrees which were the exponents of this mystical discipline?

And this course, in the German gymnasia, has the merit, too, of being open to improvement, as the science of pedagogy advances—that science which determines the proper and adequate preparations for free and independent study, and many self-discipline. For the increase in the number of sciences, for the wider and richer unfolding of the sciences, for the farther sweep of all human knowledge, provision is made in the University.

We perceive, then, that the establishment of the gymnastic preparatory course has led to the proper development of the university. Or, taking the actual historical order of development, instead of the logical, the efforts of great and enlightened scholars to perfect the university, forced the gymnasium into existence. See, now, how natural and beautiful is the relation of the two! In the gymnasium, the student serves his apprenticeship to the art of study. But the art of study is gained in the act of studying, that is as knowledge is gained. But, again, the branches, by the study of which the art of study is gained, are those which are preparatory to the study of all science fully provided for in the university; that is of languages, the pure and mixed sciences in their fundamental principles, history, criticism, and of whatever may lie at the basis of a superstructure of knowledge in any field open to the human intellect.

Now, entering the university not by presenting a diploma, but through the ordeal of an examination, the student finds himself qualified to read books, to investigate subjects, to listen to learned lectures, to engage in learned discussions, and to carry on wisely his education, whether he addict himself to a profession, to any particular science, or aim to become himself a professor in any of the faculties. In the university, the opportunities of study are without limit, and the student may be a student all his life.

We have remarked that degrees do not wait upon the course of study pursued in the gymnasium, although, that course embraces all that English and American colleges can pretend to. Indeed, according to the most ancient academical laws and precedents, the university alone is competent to confer degrees. Even in England, where education is resigned into the hands of the College, the University alone confers degrees. In Germany the University confers degrees also, but sparingly, specially, and never upon whole classes. We have already stated that the two degrees of arts are abolished.—This may be considered as consequent upon a new division of the subjects of study. In the scholastic age, the studies belonging to the three learned professions were termed philosophies, and all other studies were termed arts. In Germany, the studies of the learned professions are designated by the titles of the three corresponding Faculties—theology, law, medicine; and all other studies are comprised under the general title of philosophy, with a corresponding faculty.

In philosophy only one degree is conferred—that of Doctor of Philosophy. This is conferred upon application by the candidate, and after an examination. It has a meaning, since he who receives it, is deemed qualified to commence a course of lectures in the university. In medicine and law the degree of Doctor is conferred upon the same conditions and implies here likewise the qualifications and privileges of a public lecturer in the respective faculties. Doctor of Theology is purely honorary, and is conferred rarely, and only upon clergymen of very high distinction. The old academical law is thus preserved in the German universities, by which a master or doctor is entitled, if not obligated to teach. We find in these Universities three classes of teachers: First, the ordinary and salaried professors; second, the professors extraordinary, or, as we would say, assistant professors, who receive no salary, and depend upon class fees alone; third, the mere Doctors in the different faculties who commence lecturing, and who, also, receive only class fees. These are called *Docentes* or Teachers.

A German University is, therefore, an association of scholars for scientific and educational purposes, as truly as the scholastic Universities; but as much in advance of the latter, as the modern world is in advance of the middle ages in general intelligence and useful improvements. We find here renewed, the freedom, the spirit, the ideal conceptions of the Greek schools; we find preserved in full energy the organization of the scholastic Universities; but, in addition to this, we find the modern University placed in its proper relation as the culmination of a grand system of Education. The good of the

past is preserved, the evils are eliminated, the imperfections are supplied, and the unity of all true progress is demonstrated.

The third point to be noticed in modern educational development is popular Education. This is a necessary part of the educational movement, and must follow the proper university development. We have shown how the few great thinkers must first appear; how they naturally become the educators of their day, and permeate all following times with the quickening energy of their thoughts. We have shown how naturally and inevitably learned associations arise from these, and grow into educational organizations. It is all a work of genius and free thought. It is a light struck from the heart of humanity itself. It cannot be isolated, it cannot be confined; the very law of its existence is that it shall spread itself far and wide. Disciples gathered around the old philosophers to be taught; they in turn could not but teach others. Thousands crowded the halls of the scholastic universities, drawn by the charm of knowledge, themselves to be graduated as teachers; the very condition on which they were taught was that they should teach others. Education has never been confined to rank. The call to thought was breathed by the winds, murmured by the streams, scattered abroad by the light, written in the beauty, harmony, and glory of creation, and spoken in the inward sense and longing of the human heart. Education could not begin, without, in the end, becoming universal.

The modern university exemplifies this principle of necessary diffusion. The university must be supplied from the gymnasium; the gymnasium must be supplied from the broad and deep reservoir of the people. But a rudimental training becomes necessary as a preparation for the gymnasium. Here then is the necessity of a general rudimental education. Then arises a supply of a different kind moving in the opposite direction—a supply of teachers. The taught must teach, or the whole system breaks to pieces. Hence, the university supplies teachers not only for itself, but for the gymnasium also; and the gymnasium must directly or indirectly supply teachers for the people. With the multiplication of educated men, entering into all the offices of society, the charm of education is felt, and its necessity perceived. The genial inspiration spreads, and a whole people is pervaded by the spirit of education. Popular education is the natural and necessary result.

Compare now the state of popular education in England with that in Germany. In England the university system has not reached a proper development. Here the teachers are only the fellows—an elect and exclusive class; while the graduates at large instead of feeling the obligation of becoming teachers in time, and finding a field

open for the exercise of their vocation, go out into the world as men who are possessed of a privilege which belongs to rank and fortune. And hence, no system of popular education has, as yet, made its appearance here.

In Germany on the contrary, where the gymnasium is open to the poor as freely as to the rich, where all who honorably pass through the gymnasium cannot fail of finding access to the university, and where every educated man becoming a member of the great educational system, incurs the obligation as well as meets the demand to contribute by his labors as a teacher to its sustentation—there we find a most perfect system of popular education. As every thing in education depends upon a proper supply of teachers, so there the primary or common school is provided for in a distinct institution—the Seminary or Normal School; while this again is supplied with instructors from the university and gymnasium.

The grand result may be stated in a few words—every individual of the people receives at least a rudimental education, and the highest forms of education are possible to all, without distinction of rank and fortune.

We have thus, in pursuing the course of educational development, been led to the German, or, as it is more commonly called, the Prussian System, its highest, and most perfect representative in modern times. We have been led to this inevitably. It is not the opinion of an individual, or of a class. The wisest philosophers, and the greatest educators have united in commending this system. Were it necessary to appeal to authority, I might mention two names, than which none can be found more illustrious for intellect and learning, or more devoted to the great cause of education and civilization. I refer to Cousin, of France, and Hamilton, of Scotland. The first, while minister of Public Instruction, was sent on a special mission to Prussia, to examine and report upon its system of education. That report was received with universal approbation in Europe and America. Through its influence, important changes were introduced into the system of public education in France. Hamilton reviewed this Report in the *Edinburgh Review*. "The institutions of Germany, for public instruction," he remarks, "we have long known and admired. We saw these institutions accomplishing their end to an extent, and in a degree elsewhere unexampled; and were convinced that if other nations attempted an improvement of their educational policy, this could only be accomplished rapidly, surely, and effectually, by adopting, as far as circumstances would permit, a system thus approved by an extensive experience, and the most memorable success."

IV. ON IMPROVEMENTS PRACTICABLE IN AMERICAN COLLEGES.

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Continued from Page 185.

Should neither of the plans, [first, by lengthening the period allotted to college education, and secondly, by increasing the exactions required for admission into the lowest class,] which I have presented for relieving our colleges from their present embarrassing condition, in which they are consciously attempting a greater labor than they are capable of performing, meet with general favor, then I know of no alternative but that we should reject entirely from our regular course of study for graduation, many of those branches of Natural History, or of physical science, pursued into its practical applications, of which we now confessedly furnish but very meager sketches, and which therefore, without being themselves mastered even in outline occupy much time which might be more usefully employed. I extend this remark to the modern languages, which are always easy of independent acquisition by a person who has use for them, of which the proper pronunciation, which is the only particular in which the assistance of a teacher is necessary, is literally *never* acquired in colleges, but which, in many institutions within the circle of my observation, have made very large and serious encroachments upon the time once devoted to the eminently disciplinary and inestimably valuable study of the Latin and the Greek.

Is it worth while to deceive the public, by pretending to teach all these things when the possibility of our doing so, except in pretence, is a palpable absurdity?

But it may be said that the mere outlines we give have their value. If they do not conduct into the depths of a science, they furnish some general notions regarding it; they acquaint the student with names, and enable him to converse upon such matters in a general manner, so as not to appear utterly ignorant when they happen to be introduced as topics of discussion. This is a plausible apology for superficial knowledge, but I can call it nothing better. I can not believe that the advantage gained is worth the sacrifice which is

made to secure it. The fact is, that most branches of natural history are subjects on which individuals must inform themselves independently of masters; or if they resort to the assistance of proficient, they must do this in institutions specially devoted to the elucidation of such subjects. Associations of naturalists furnish the best schools which our country yet possesses for this purpose, and no individual, whatever may be the extent of his elementary acquirements in those departments of knowledge, will find them of any after value, if he neglects to resort to these means of advancing and perfecting them. If then, our colleges would disencumber themselves of any part of the intolerable burthen which they attempt at present to carry, and if they can not be induced either to throw a portion of it upon the schools below, or to extend the period of time over which it is spread, they have no remaining resource but to abandon the attempt to teach some of the many things in regard to which their present teaching is little better than a farce. Let practical sciences, like Civil Engineering and Chemical Analysis go over to special schools, of which already several have arisen, either associated with colleges or disjoined from them, highly honorable to the country, and, until higher Universities rise up among us, let the various branches of Natural History find their encouragement among associations of men whose taste lead them to their cultivation. If, however, either of the previously suggested expedients be deemed more eligible, let the concluding years in college be given in great measure to subjects of this nature; and in order that the results may not continue to be as unsatisfactory as they are at present, let the principle of option be freely introduced into this part of the course, so that the efforts of individuals may not be rendered unproductive, by being frittered away upon an endless variety of subjects.

I pass to inquire whether our college system does not admit of some improvement in regard to the *stimulants* held out to incite young men to intellectual effort. In professional schools, to which students voluntarily resort, at a time when they begin to feel themselves dependent on their own exertions, and when they are conscious that the knowledge they acquire is to determine the degree of their success in life, no special stimulants are necessary to secure the profitable employment of their time. In college, this motive is much less influential, and, as a general rule, it may be said hardly to exist at all. To an imperfectly disciplined mind, on the other hand, mental exertion is positively irksome, while in the morning of life, the allurements of pleasure and the temptations to indolence are almost

irresistible. Opposed to influences so prejudicial to the formation of studious habits, we have that love of pre-eminence which naturally inheres in the breast of all mankind, and which, of itself, without being fostered by any artificial stimulus, is sufficient to elicit in many, a very commendable spirit of exertion. The pride of successful scholarship is a feeling honorable to its subject; and I am far from being able to believe that it ought in any manner to be repressed. There are some, I know, who regard all pride as sinful, and who maintain that the actions of men, whether in youth or in age, ought to be influenced by no motive but that which is found in a sense of duty. Such views, however, are not those of the majority of men; and I shall presume, without entering into any argument on the subject, that they are not the views of the body I am addressing.

But if the simple desire to earn an honorable name for intellectual superiority in the little community of which he is a member, be often a sufficient motive to impel a student to exertion, this motive may be rendered much more efficacious, by the adoption of such means to mark this superiority, as shall stamp it with the character of an ascertained and recognized fact, and shall give it publicity not only in the college but in the surrounding world. In most of our colleges, therefore, varying grades of honor are assigned to the most distinguished members of each class, at the conclusion of the course, and sometimes on other occasions. It is generally an honor, to be permitted to take part in the public exercises of commencement day, or of the class exhibitions; and certain of the exercises then assigned to individuals are commonly understood to signify a distinction of the highest character.

This plan is attended with undeniable advantages; but it is to be observed of it, that all the distinctions it confers are merely relative in their significancy. They denote the superiority of one individual over others of the same class, but they afford no means of comparing one class with another. It seems to be desirable that some means should be devised for stamping absolute, as distinguished from relative merit. We ought to be able to say of a scholar, not merely, that he is better than another, which, if the entire truth were known, may after all be but insignificant praise; but that he is capable of passing with honor some definite and intelligible ordeal, such as may be provided by requiring of him the performance of tasks of ascertained difficulty.

Such tasks may be prepared in the several departments of instruction by the officers respectively in charge of them; and if no individual of a class shall be found equal to the highest or the second or

third in grade of difficulty, the corresponding honors may for that time be withholden. A plan like this will make the members of every class competitors, in a certain sense, with all who have gone before them; and its tendencies must obviously be to stimulate effort to a much higher degree than where the competition is only for the stamp of a certain nameless and indefinite merit, in no instance clearly ascertained.

It is worth considering, moreover, that this plan will remove, in great measure, the moral evils which are probably inseparable from a competition immediately personal; since, when the struggle is for absolute and not for relative superiority, the success of one aspirant to honor does not involve the necessary humiliation of another.

As permanent tokens of these distinctions, prizes in the form of valuable medals, books, instruments of science or other convenient objects, may very properly be conferred. The number of these, the frequency with which they should be distributed, and the various kinds of merit which they may most judiciously be employed to distinguish, may be subjects for more mature consideration.

As to the manner in which these distinctions should be awarded it is obviously proper that the performances of all the parties convened, should be submitted to a committee of disinterested judges, who should have no duty but to compare them with the standard of absolute excellence set up, and to determine how far they fulfil the conditions required. Upon their report, the decision should be announced and the prizes presented in presence of the public, on Commencement day.

As to those relative distinctions which are now I believe, almost invariably made among the members of each class, since they are awarded in view of the whole series of performances which have been daily exhibited throughout the whole preceding course, it appears to me that they should be made to depend, not entirely upon the judgment of the faculty, nor entirely upon the exhibit of the contemporaneous record, but to a certain extent at least, upon the opinions of the students themselves as expressed by vote. The voting should be not explicitly to assign definite distinctions to definite individuals, but should be in the form of lists of merit, which should include the names of the entire class or section to which each voter belongs, or of so large a number of them as may be prescribed, his own course being excluded, arranged numerically in the order of merit. Double lists may perhaps with propriety be required, distinguishing independently the order in letters and in science; and every voter

should of course be put upon his honor to give his suffrage in accordance with his honest convictions.

I found this opinion upon several considerations which appear to me to be not without a sensible importance. In the first place, students observe their fellow-students from a point of view inaccessible to the Faculty. They are sometimes aware of the practice of arts which can not be known to the instructor, by which an individual may seem to be entitled to a credit which is not fairly his own. Translations and interlined books in the languages, borrowed solutions in the mathematics, and other similar aids, may be employed by some, while by others they are honestly rejected. To give to the popular voice a certain weight in the assignment of honors, is to put the most effectual check which occurs to me to practices like these.

In the second place, to make all young men more or less dependent for distinction, upon the estimation in which their attainments and abilities are held by their peers, is to impress them with a higher sense of the value of an honorable reputation, and a more honest desire to possess a real rather than a seeming merit. In this view of the case, I can not but believe that the moral influences of the plan I recommend must be good.

In the third place, I believe that it would be a gratification to the parties interested—and all are more or less interested, whether candidates for high distinction or not—to be recognized as judges in the assignment of the honors won in a competition of which, all have been equally witnesses; nor can I perceive that any disadvantage can attend the policy of permitting this gratification.

I would, of course, have the judgment of the instructors, as well as that of the students, consulted; but as to the relative weight which should be given to each, I am not fully prepared at this time, to express an opinion.

Besides the stimulants to exertion already mentioned, an additional one may be provided by the foundation of scholarships. Scholarships already exist in some of our colleges, but I do not know that they are generally conferred on individuals in reward for meritorious exertion. Indigence has perhaps been regarded as presenting a higher ground of claim for their advantages than merit; or possibly it may be said with greater correctness that while merit has been in some degree considered, indigence has nevertheless been made an indispensable condition of their bestowal. If scholarships, however, are to be employed for the purpose of stimulating the highest exercise of talent, they must be trammelled by no considerations like this. They must be understood to be rewards of merit exclusively,

and they must be conferred on the most meritorious without regard to their circumstances. It is unfortunate that, in the great multiplicity of colleges in America, the public munificence is so divided up and parceled out, as to render the expedient here suggested one which we can hardly hope soon to see generally employed. Scholarships are too expensive expedients to be available in institutions which are barely able to sustain themselves, and which do actually succeed in sustaining themselves only by making the salaries of their officers barely sufficient to sustain life. But if, in any of our institutions, it should be found practicable to hold out the encouragement to exertion, which the prospect of securing a scholarship may be presumed to afford, the following suggestions may have a value.

1. The design of these species of stimulus being to keep the spirit of effort alive, a scholarship should be liable to forfeit, whenever its incumbent falls into habits of idleness or vice.

2. As the object is to encourage industry *in college*, and not directly to reward successful exertion during the period of preparation, no scholarship should be conferred upon a student, until after the close of at least a year from the time of his admission. The benefit may then be made retro-active, and the value of the scholarship for the year that is past may be made over to the successful competitor at once.

3. This principle may be extended, should it be thought proper, from year to year; or the beneficiary may continue to hold his position, until, by his own neglect of study or vicious conduct, he may be adjudged to have forfeited it. Under these conditions, scholarships, whenever there exist the resources to create them, may probably be made an eminently efficacious means of encouraging to attainments of the highest order. Since they are conferred as honors, no fastidiousness will be likely to reject them merely from a fear of incurring the imputation of mercenary motives; while the pecuniary benefits which they carry with them will prove a real, though perhaps an unavowed, incentive to the desire of securing them.

It may be said, and there is force in the remark, that the kinds of stimulus of which we have been speaking are in their own nature, restricted to the few. Scholarships and prizes can not be numerous, and the merely nominal honors which most colleges confer, leave, after all, the great majority of every class undistinguished. To obviate in a measure this advantage, a plan of grading is in general use, founded on the recorded values of the several performances of all the students, estimated according to a definite scale. Upon this basis, a special merit roll is made out in each study or in each department,

and a general merit roll is constructed from a combination of all of these together. The results of these records are usually communicated periodically to the parents and friends of every student. By this means the honor which is due to respectability is presumed to be secured, no less certainly than that which the higher distinctions award to superiority; and no one is permitted to feel that his deficiencies will be covered up and concealed, in consequence of his being confounded with a multitude.

This plan, which in theory is unexceptionable, seems to be attended with some practical disadvantages. An experience of many years has failed to satisfy me that its tendencies are entirely good. It encourages to a pernicious extent a disposition to resort to those artifices by which young men often endeavor to impose on their instructors; and leads them to place a higher value upon show than upon substance. This is among the considerations which have induced me to believe that it is useful, from time to time, to take the sense of the students themselves in regard to each other's merit as scholars. Were this practice to be made a recognized part of the system, I am persuaded that results much more worthy of reliance than are now possible would be reached; while genuine scholarship would become an object of higher ambition, and unworthy arts would fall into deeper disrepute.

The system of grading might furthermore be made more efficacious as an incitement to application than at present, should classes be divided into sections upon the basis of comparative scholarship. This plan is, I believe, in practice at the Military Academy at West Point; but I am not aware that it has been introduced into any of our colleges. Let those of the highest order of merit be separated from the rest, or let there be several subdivisions established on the same principle, each reciting by itself. Degradation or promotion from section to section may then be made the penalty of relaxation of effort or the reward of increased diligence and success. To carry out in practice a plan of this kind may seem to require an increase of the number of instructors now found sufficient, or of the amount of labor which the same instructors are expected to perform; and to a certain extent, this may be true. But with the reduction of the numbers reciting at the same time, the duration of the recitation may also be, in a measure if not correspondingly, reduced; so that the burthen may not necessarily become intolerable.

I believe this suggestion to be well worth consideration. It is notorious that the largest amount of the teacher's time and attention is almost invariably occupied with those members of a class who are

most deficient in preparation of their daily exercises; and who either from inattention or incapacity, are slowest to learn. This portion operate as a dead weight in retarding the progress of the rest; and the example of their imperfect performances operates inevitably to degrade the standard of excellence in recitation. Let them be separated from their superiors, and, if they are capable of being stimulated at all, they will endeavor to escape from the implied degradation; if not, they will at least, no longer be an injury to any but themselves.

The object of University Examinations in foreign countries is to determine the fitness of their subjects for the honor of graduation. With us, for the most part, this fitness is presumed to be ascertained mainly by the record which is kept of the performances of our students during the entire period of collegiate instruction; and if examinations are regarded as criteria of attainment at all, it is only to a moderate degree. In point of fact, as they are usually conducted, they are not worthy of any great reliance, considered as tests of scholarship or attainment. They are generally brief in duration, confined rigidly to the matter of text-books, almost always oral, and conducted in each department by the instructor himself. A few minutes allotted to each student is all that the arrangements permit. A few questions, difficult or simple, as accident may determine, a single passage in a Latin or Greek author, a single proposition in the mathematics, or the enunciation of a principle in physical science, furnish the entire test by which the attainments of several years are to be judged. It is no uncommon thing for a young man conscious of great deficiencies, to congratulate himself upon his happy escape; or for one who entertains a pretty well-founded confidence of success, to be subjected to severe mortification. Our colleges are therefore right in regarding their examinations, as they are at present conducted, as being of comparatively little value in determining relative grades of scholarship, or in ascertaining the fitness of their students for graduation.

I have no hesitation in expressing the belief that, unless these exercises can be so modified in their plan and their thoroughness, as to become in fact what they profess to be in name, it would be better that they should be abolished entirely. They ought to be the means of ascertaining how faithfully the student has employed his time and what is the extent of his knowledge of the subject with which he has been occupied. To this end, they should in the main be conducted in writing, and the same tests should be applied in every individual case. These tests should be carefully prepared before-hand, in such a manner that they may show at once the range and the depth of the student's knowledge. Time enough should be allowed to

render the trial a thorough one. The tasks allotted to each examination-session should only be made known after the session has commenced; and no one should be permitted to depart until he has completed his performance. Such performances may be fairly relied on as presenting an exhibit of scholarship both positive and comparative; and in this respect they are infinitely preferable to any record of daily recitation which can be kept during the period of instruction.

A great vice of this latter criterion is, that it encourages a habit of studying merely for the moment; of depending too much upon the mere exercise of memory, and of concentrating the attention too exclusively upon the task of the day, without sufficient regard to its connections with those of yesterday and of to-morrow. The instructor, who, without giving previous notice of his intention, calls for some fact or principle which was fresh a week before, finds himself too often able to elicit only the most unsatisfactory and meager replies. If young men are made to feel that their merits will be estimated by the actual *results* they have to show for the time and labor they have expended during their college course, and not by that semblance of knowing which is carried without much difficulty directly from the text-book to the recitation, it may be hoped that substantial attainments will come to be more highly esteemed, and will be more generally met with.

Some of our colleges already employ the plan of examination which I have recommended. Whether any of them make it, however, the sole basis of *classification* in regard to scholarship, I am not informed. That it ought to be made so, I am, for my own part, fully persuaded. I can see no injustice which it is likely to operate, since it places all upon a footing of more perfect equality in regard to opportunities than any other plan which can be devised. And its adoption will at once set at rest many troublesome questions which are apt to arise, in the adjustment of the scale of merit upon the plan now generally in use.

The subject of academic degrees requires but a brief notice. I suppose, that if our colleges continue to adhere to a prescribed course of instruction, some form must be kept up to distinguish the student who has fulfilled all the requirements of this course, from one who has not. The degree of Bachelor of Arts serves at present to make this distinction. I do not know that it has any other use; but should it be abolished, as some have desired, I see no escape from the necessity of adopting some substitute to answer precisely the same purpose. If any object to the *name*, on the score that the word "Arts," in the

sense in which it is here employed, is obsolete; it may be very well replied, that the name is ancient, and venerable, and universally intelligible; and that, if it carries with it, as it does, a sort of academic odor, it is in fact all the better on that account. But since, in regard to the necessity of preserving the *thing*, there can hardly be two opinions, it seems to be a very idle and useless waste of time to dispute about the name by which it shall be called.

Some writers who have advocated the voluntary, or as it has been otherwise called, the "open University" plan, have sneered at this feature of our system, as if the degree were the reward of *residence* in college, and not of any necessary amount of attainment in arts. Any one, they say, can attain the distinction of graduation, who chooses to remain four years in college; whereas in the model institution, in which their views are illustrated, no one can be a graduate, however long the period of his residence, until he shall have been pronounced proficient in a sufficient number of departments. These statements are in a certain sense correct; and in a certain more material sense, otherwise. A student, after a four years' residence in college, usually succeeds in securing the Bachelor's degree; but it is to be observed that he must first *reside the four years*—a matter not entirely optional with him, since he is always liable to be turned back or dismissed for deficient scholarship. In the "open" Universities, on the other hand, though degrees are not granted except on evidence of proficiency, I know nothing to limit the duration of residence, so that apparently they are deficient in one important species of stimulus to industry.

The degree of Bachelor of Arts, or something equivalent to it, to be conferred on those who appear to be worthy of it, at the end of the stated course of study, seems to me, therefore, to be indispensable. But though I see no reason to recommend any change in regard to the usages relating to *this* degree, the case is very different in reference to the higher degree of Master. In the English Universities, when the period of education extended to seven years, and when teaching in order to learn was one of the agencies employed in those institutions, this degree was conferred only after the Bachelor had devoted himself for three years to higher attainments, and to the business of actually instructing others. Among the many abuses which have crept into those venerable institutions, these regulations have disappeared. Neither teaching nor study is necessary to enable the Bachelor to proceed Master, yet the three years' interval between the granting of the two degrees is still maintained. Our colleges have borrowed this later English usage; and in most of them

now, the degree of Master is conferred "in course" upon all Bachelors of three years' standing. The consequence is, that the degree of Master of Arts is significant of nothing at all, except of the fact that the recipient has been graduated before. It is therefore of no use as a stimulant to exertion, to students either in college or out; and it might without any disadvantage be abolished entirely.

Our practice in conferring this distinction indiscriminately upon all the alumni of our colleges, operates to render it nearly valueless when it is bestowed, as it occasionally is, for meritorious attainments, upon those who are not already graduates. An honor is not an honor when it is shared with all the world; and more especially when it is attained by most of those who wear it, without any merit of their own. It seems to me that the practice of our colleges on this subject should be discontinued; and that hereafter, if there is to be such a thing as proceeding to the Master's degree "in course," this course should mean something more than *the course of time*. Perhaps a careful examination of this subject may lead to some eligible plan for reducing within tolerable limits the extended curriculum of study upon which I have already sufficiently commented. Perhaps the idea of lengthening the period of study may be rendered more acceptable, by suggesting that the Bachelor's degree may be conferred at the end of four years, upon such as have passed through a course of a character mainly disciplinary; and the Master's degree reserved for those who choose to remain an additional period in the pursuit of those branches for which we have, at present so little time to share. Upon these points I content myself with these brief suggestions.

Though the government of our colleges is, in theory, parental, in practice it partakes very little of this character. The arrangements presume that the students are subject to the constant supervision of the authorities, but in point of fact this supervision is so nearly nominal, as, if considered in the light of a restraint, to be without any material value. Though students, are by law at all times liable to visitation in their apartments, they are rarely visited oftener than once a day, and in many colleges not so often. The influences by which a disposition to disorder are principally restrained, are simply such as operate on men in ordinary society—the advantages which spring from a fair reputation, and the disadvantages to which irregularities of conduct inevitably lead.

The difficulties of College Government, grow mainly out of the questions, how shall offences be prevented, and how, when they occur, shall offenders be treated. In regard to the first point, I am persuaded that little is gained by holding out the idea that the Fac-

ulty expect to accomplish much by the mere exercise of vigilance. This is directly to invite a trial of wits between the two parties, in which the advantages are all on one side; and it is to give birth to a feeling that good order is not a matter in which the governors and governed have an equal interest. My experience satisfies me that, more may be accomplished by appealing to the sense of propriety of which no young man is wholly devoid, and by professing to *expect* that a community of young gentlemen will behave as gentlemen should, than by permitting them to suppose that any reliance is placed upon any degree of watchfulness which the Faculty have it in their power to exercise over them.

In regard to the treatment of offences, I am less and less inclined to believe in the efficacy of any graduated system of penalties. Private admonition and remonstrance I regard as preferable, in all cases where offences are venial, to public censures; and if these means fail to reform, they should be followed by removal from college without the superadded mortification of notoriety. More serious cases, which are rarer, may require severer treatment. In regard to such no remark is necessary here.

In many institutions the practice exists of keeping a record of demerit. All minor offences are rated according to a certain numerical scale, and the student whose account reaches a certain maximum, within a time specified, is cut off from his connection with the institution. In a college of which I have been an officer, I have seen this plan in operation for many years; and I have afterward seen it discontinued for several more, without any sensible disadvantage. In fact if any noticeable consequence could be considered as attributable to the change, it was rather an improvement than a deterioration of the general good order of the community.

No one can be more decidedly opposed than I am, to excess of penal legislation. Its effect is often as much to create as to prevent evil, and I have never yet seen a college in which the fault appeared to be that there was too little.

In regard to the discovery of the perpetrators of secret offences, the laws of different colleges differ among themselves. Some institutions claim the right to compel every student to exculpate himself; for which purpose his own declaration is, in the absence of any circumstances calculated to invalidate it, accepted as sufficient proof of innocence. Others require the testimony of the witnesses to the facts, thus occasionally compelling one student to inculcate another. Both these methods of investigation have been the occasion of serious difficulties; and it is probable that neither is expedient so long as there

is any possibility of securing the ends of good government without them. The first appears to me, after having been a witness of its practical working, in several instances, to be so objectionable, that I can not believe it ought any longer to be suffered to stand, as a rule of proceeding in any college. The other, which is the only alternative, can hardly be relinquished, unless it is intended to disarm the government entirely; but the cases which will justify an appeal to the powers it confers, will very rarely occur in an institution which is generally well managed.

It is my opinion that the colleges of the present day are distinguished by a much greater uniformity of good order, and so far as appearances go, of propriety of conduct on the part of students, than was the case twenty or thirty years ago. Those premeditated disturbances and freaks, originating in the pure spirit of mischief, denominated "college tricks," have, within the limits of my observation, been growing less and less frequent; and the occasions have become sensibly rarer throughout the country, on which there has been any thing like an organized resistance to college authorities. Whether this be a result of a growing disposition on the part of college officers to rely more upon personal influence, and less upon law than formerly, or whether it be owing to the increased disfavor with which such things are looked upon by the public, the result may in either case be accepted as an evidence of improvement, which can not fail to be gratifying to the friends of education every where.

In connection with the subject of government, it is in order to allude to a radical evil of our system, out of which a multitude of consequent evils grow. I can conceive nothing more injudicious in principle than the collecting together, in an isolated community, apart from the observation of the public, and but nominally subject to the supervision of those who are presumed to watch over them of a large body of young men fresh from the restraints of the family and the school, and surrounded by a multitude of novel temptations. The dormitory system, as it is called, I esteem, for such a class of persons, to be purely and unqualifiedly bad. It is pernicious equally to the morals and the manners. It fosters vicious habits, blunts the sense of delicacy, encourages rudeness and vulgarity of speech, leads to disregard of personal neatness, and is finally the obvious and immediate cause of nearly every one of those offences which the penal laws of colleges are enacted to punish.

I am aware that many of our existing colleges are so situated as to render the abandonment of the system, at least for the present, and for then, an impossibility. The dormitories are built, and no

choice remains but to continue to occupy them; since they are unfortunately built in situations where no other accommodations can be obtained. Their locations have been selected in consequence of what seems to me to be a very idle fear of the injurious influences which are supposed to hang around large towns. In some cases, where a choice has been made more wisely, either no dormitories have been erected at all, or none have been recently erected to accommodate growing numbers. This is a subject, the discussion of which is out of place here, and my views in regard to it have been elsewhere so fully expressed, that I content myself with this brief allusion to it.

It is a part of the duty expected of me that I should consider the question, whether it is possible to do any thing to improve the relation in which our colleges stand to each other. Upon this point I shall be very brief. In the first place, it may be observed that if the system itself is to undergo any important change, the benefits which such a change may bring with it, can only be secured by the general acquiescence of all the institutions concerned. The perfect independence which our colleges enjoy, not only of each other, but of any superior controlling power, renders it impracticable to unite them in any common and simultaneous movement, except by first convincing them of its necessity. If it is not a mistake to presume that such a necessity does really exist, then we can not doubt that a conviction of its reality must every where follow a fair examination of the subject. The question then next arises, how can we secure such an examination—how can we awaken the spirit of inquiry among all those who, whether as officers of Faculties or members of superintending Boards, hold in their hands the management of our more than one hundred and fifty scattered collegiate institutions? Correspondence originating with those who are already alive to the importance of this subject might accomplish much; but who shall take the lead in such a correspondence, or bear the heavy burthen which it imposes? And how, supposing that any zealous individual were to put himself forward in this work, how could such an one hope to secure for his suggestions any higher consideration than is usually bestowed on the opinions of an individual?

Two ideas occur to me as containing within them a possible solution of the difficulty. The first I scarcely venture to present, even with the utmost diffidence. It is, that a convention of delegates from all the principal colleges of the country should be assembled to deliberate upon the measures which the common good requires. It would be too much to anticipate that any very large progress could

be made during the sitting of a single such convention. If the plan is worth adopting at all, it ought to involve the idea of a sort of permanent council periodically assembling perhaps as often as once in every one or two years.

I should consider a suggestion of this kind as being entirely visionary, if I were not in some degree encouraged by the fact that, in this Association, we have already an organization which must annually bring together a great and increasing number of the friends of education; among whom we may with just reason expect to find many who are interested in the management of our colleges. If therefore, it should seem to be worth an effort to attempt to secure such a convention as I have suggested, the time and the place which would appear to offer the highest probability of success, would be those fixed upon for the meetings of this Association. I am aware of the serious difficulties which must attend the working of a plan like this. The vast extent of our country, the consequent great distances which many delegates would be obliged to travel, and the expense to which they would be subjected, added to the deficient interest which will probably be felt, in the beginning at least, and in many quarters, in the object proposed, would too probably render the attendance far from general.

I would suggest, therefore, as an alternative proposition, that the standing committee of this Association, or a special committee appointed expressly for the purpose, should be instructed to open a correspondence, by circular, with every college in the country, setting forth briefly the nature of the evils presumed at present to exist in the system, or communicating documents for that purpose; and soliciting from each a distinct expression of views thereupon. Upon the basis of the results thus obtained, the convention could proceed hereafter explicitly to recommend the immediate introduction of such modifications of the system, as should appear to be sanctioned by the majority of voices; and the knowledge that they are so sanctioned would furnish a pretty good guaranty for their general adoption. I limit myself to merely throwing out this idea. I am unwilling to trespass further upon the patience of the Association by enlarging upon it.

Apart, however from the object of endeavoring to unite all the colleges of our country in some plan of definite, simultaneous and concerted action, it seems to be eminently desirable that the officers who control them should cultivate a more extensive and intimate personal acquaintance with each other. I trust that this Association may be found to be one of the most important instrumentalities in

bringing about so desirable a result. We meet here upon a common ground, and if we do not come as delegates expressly authorized to commit the institutions we represent to the adoption of specific measure of reform, we nevertheless gather each other's views, ascertain the sense of the majority on all important questions, and go home with re-awakened zeal to pursue our labors in the common cause; and possibly with more enlightened views and better established convictions, as to the direction in which we should put forth our efforts.

Nor should it satisfy us that we meet occasionally here upon a common ground. We should *visit each other* at home, acquaint ourselves with each other's usages, observe each other's arrangements and facilities for giving instruction, attend if possible each other's daily exercises of lecture and recitation, be present as frequently, as our opportunities admit, on the occasions of each other's public exhibitions. By this means, we shall learn to take an interest in other institutions, not unlike and hardly inferior to that which we feel for our own.

It is also highly desirable that an active *correspondence* should be kept up between the officers of different colleges. Nothing can be more effectual in keeping alive an interest in each others prosperity. The interchange, moreover of printed documents and papers, is not only gratifying as an attention, and encouraging as an evidence of, sympathy, but it is substantially useful. Catalogues, addresses printed outlines of lectures, and examination papers, may all furnish information of more or less value, and may sometimes contain suggestions which may be immediately turned to profit.

Finally, the officers of our colleges should cultivate a fraternal feeling. They are laborers in a common cause, and they are bound together by a common interest of the noblest kind. No spirit of rivalry should animate them, save the honorable desire of pre-eminence in doing good. Among the incessant bickerings and animosities of which the world is full, let the friends of education make it manifest, that they are superior to all petty jealousies; and while other questions are perpetually distracting our country, and arraying section against section, on this one at least let it appear that "we know no north and no south," but that all are willing to go hand in hand in the effort to elevate the intellectual character of our whole people.

V. METHOD OF TEACHING GREEK AND LATIN.

BY TAYLER LEWIS, LL. D., UNION COLLEGE.

THE importance of classical and linguistic study has been so well set forth, that I would not dwell upon it here, except very briefly in its connection with my main topic. Its benefits may be classed under the three heads, the disciplinary, the philosophical, and the literary. The first, by some regarded as the most important, we would treat as the lowest in the scale, though still of as high virtue, even in this respect, as those that come from any other department of Education. The second occupies a higher rank. Comparative Philology is in fact becoming the great science of the day. Its connection with Ethnology, and History, with Mental Philosophy in all its departments, is constantly becoming more clear in the abstract, as well as prospective of great benefits in practice. Under this head, too, one might dwell upon its psychological bearings, as resulting from the peculiar position, that the study of language occupies among the sciences. It alone combines perfectly and equally, the objective and the subjective, the outward and the inner world of thought. It is as purely spiritual as Psychology or Logic. It is as distinctly outward as Botany or Geography. The soul, studies itself, but through an outward product as real as the trees, the flowers, the gases, or the rocks; a product which has come from the working of mind through laws as fixed and as ascertainable as those which have developed the plant, the strata, or the chemical combination. And this product is no mere idealized entity, but an abiding, outward thing. It is thought crystalized, laws of thinking exhibited in fixed outward growths, which we can study with as much satisfaction, and as much assurance of finding wonders, as in any of those fields of physical science which are wholly objective.

But these remarks concern the whole province of language of which the Greek and Latin only form a most important department. The third benefit we mentioned, pertains to them in a more exclusive sense. We have called it for the want of a better name, the *Literary*. Aside from the disciplinary and philological benefits, classical education opens the door to an immense field of philosophy and life-

ture, whose value at the present day, it would not be easy to calculate. The writer may be led away by a magnified view of his own favorite studies, and yet he must express the opinion, that in the present condition of our country, nothing is more desirable in education, than to bring as much of the youthful mind as we can, in as close communion as we can with the rich literature, and richer philosophy of antiquity. We want it, if for nothing else, for the effect it would have on our modern style of writing. The Greeks and Romans, to their honor be it said, had no light literature in the modern sense of the word. Their short lived comedy, and what may be called their lighter lyrics, can hardly be regarded as forming an exception to our remark. Their poetry, in the main, was ever serious. Their tragedy was deeply moral and religious. Their history has been pronounced too grave. With them the novel was unknown;—that modern thing, which, whatever may have been its merits, is now becoming such an intolerable nuisance. But we have chiefly in view the gravity and dignity which pervaded every department of ancient letters, its freedom from clap-trap, or what may be called the continual effort at fine writing and fine speaking. The secret of all this is, that they wrote not for the million, but for the thinking and cultivated, or we may say, for the million through the thinking and the cultivated. They wrote for minds like their own. Hence it is that they say great things in so simple, so truthful, so dignified a manner. Take the best specimens of what may be called our brilliant or flash literature, how wearied does a truly cultivated taste become with this continual sparkling, this high strained sacrifice of sense to sound, of thought to point or *ad captandum* manner of expression. We need not specify; our whole literature furnishes the most copious examples of what we mean. And then there is its still more offensive pretentiousness. Our best writers of this vicious school, say very fine things at times; they utter truths well worth the utterance, but what a puffing and blowing ever attends their birth. In reading some of the favorite writers of the day, we ever know some time beforehand, when they are in travail with a great idea, or what they would regard as a great idea. Paragraphs, and some times pages off, we begin to feel the heave and swell by which they are announced. We see the sparkling foam and hear the gurgling undertow. The wave of diction rolls up as if the writer meant to overwhelm the reader. And he does overwhelm him; the mischief is, that when the thought comes, we find there is nothing of it, or its force has been spent in all this mighty preparation, and it has not even the effect upon the mind that would have come from its simplest and most direct expression. How different in this respect, the writers of antiquity, who lived

before the marked decline of Greek and Roman literature.¹ With what a noble simplicity do Cicero, and Plato, and Plutarch, and Thucydides, say noble things! As we come upon them in the even flow of thought and style, they startle us by their grandeur, or their profundity, and yet the beauty of it all is, that those noble writers betray no consciousness of having said any thing especially grand or profound. It has been an utterance coming naturally out of the even deep of their minds. It is but the natural product of souls ever elevated, ever thinking high thoughts.

We want the minds of our young men brought more universally and more closely in contact with this severe old school. But more than this. In all the fields of thought, we want a more familiar acquaintance with these old masters. Their politics, their philosophy, their poetry are too precious to be allowed to die out, or to be appreciated by a few. Every where the classics are needed. In every respect would the national mind, and national thinking, be elevated and enriched by the study; whilst corresponding effects might be hoped for in giving a better tone, a more healthy intelligence, a higher aim to our editorial and political action.

But we are carried away to a greater distance than we intended, from our main subject. It must be resumed by showing the connection between it and these general thoughts. To produce such an effect, no mere smattering, but an extensive acquaintance with the classics is demanded. How shall this be accomplished? The little that is generally done in our best institutions is but a caricature of the idea we have advanced. A book or two of Xenophon, a half dozen books of Homer, two or three Greek plays, an oration of Demosthenes, a dialogue of Plato; and these read spasmodically, we may say, cut into fragments by daily recitations in which the connection of thought is almost inevitably sacrificed in the mastering of words and phrases,—this certainly is not the classical culture that is demanded. We would not underrate even this. The mind, whether of a man or a boy, is expanded by learning the first declension in the Latin grammar. He sees in it the entrance to a new world of thought. It is elevated and refined by reading one book of Virgil. From a few lines of Homer, a few sentences of Plato, it may get a mental impulse that is never lost, a classical taste or feeling, which may make it a very different mind, a higher mind, a stronger mind ever after. But with all this it may be said, we want far more Greek if we would have results from it to correspond with the time and labor generally spent in its acquisition.

We come then directly to the point. There should be a great deal more read than is generally read in our best schools and colleges.

Education in this department should be carried to that point where facility in reading would let the mind flow easily into the very spirit of the classic author, unfettered by that toilsome difficulty of *construing*, which produces distaste by its laboriousness, whilst it keeps the student incapable of relishing those higher treasures of thought and style, for which the classics should be mainly read. It must be carried to a point where the classical taste will be formed, and an enthusiasm called out which will make it certain that the school books even of our most respectable scholars, will not be closed, seldom if ever to be opened, after graduation.

We must read more. But how shall this be done without sacrificing accuracy, or making a demand of time which will not be conceded. The preparatory study of course must be slow. The time devoted to college is very limited; and that curtailed by the increasing demand for the physical and the practical, as it is called. The obstacles in the way are certainly very great, if not altogether remediless. We might recommend an earlier commencement of the study, a longer time devoted to preparation for college—a more thorough drilling in the elements, as preparatory to more extensive reading afterwards. Much might be said on all these topics, but we would confine ourselves to a single one. On the supposition that other things are well attended to, such as early commencement, thorough drill in respect to forms and syntactical constructions, a faithful practice of what is so indispensable, continual exercise in writing as well as reading the language; still there is one fault which may almost wholly balance the benefit of what in other respects would be the most faithful and judicious instruction.

We allude, now, to the method of reading, or construing, adopted in most schools, and which it is the harder to find fault with, because it is often a favorite with those who, in all other respects, are the most faithful teachers. There is a mode of translating, which is sometimes called the *literal*, although it might with more propriety be called the *verbal*; since, by the word literal, is sometimes vaguely meant the true, or best rendering, in distinction from the false. This *verbal* rendering, as we prefer to style it, is sometimes commended as the necessary opposite of the free, the loose, or the paraphrastic, to none of which terms, as we will endeavor to show, does it stand strictly opposed. A translation may be verbal, and yet the most imperfect of all renderings on that very account. It may be closely verbal, and yet the most loose, and false to the idea, by reason of this very unnatural strictness. To this verbal rendering, then, we would oppose as its natural and preferable opposite, what may be called the

idiomatic. The difference may be made clear in a sentence. One renders word for word as far as it can be done, for often times this is impossible—the other renders idiom for idiom. In the first, one part of speech in one language is ever made to represent the corresponding part of speech in another,—as noun for noun, verb for verb, participle for participle, adverb for adverb, &c. In the other, one *construction* is made to represent another construction, and the inquiry ever is, or ought to be, what good and idiomatic English corresponds to what good and idiomatic Greek. The pupil should be told, thus the ancient language expresses a given idea, and thus we express it—what the Greeks say in *this* manner, we say in *that*. The one is the equivalent of the other. We must translate it into our own language, not by equivalent words, but by well known, well established, equivalent idioms. The first method would often not be a *translation* at all, that is, it would not *set over* the thought from one tongue into the other. It would convey too much or too little,—seldom the precise equivalent of meaning.

An example or two will set our meaning in the clearest light. A boy has to translate the Greek phrase, *ἀλγεί τὴν κεφαλὴν*. "*He is in pain as to the head,*" says the pupil, and the teacher approves. Here is a *verbal* rendering, verb for verb, article for article, noun for noun. Why is it not correct? In the first place we reply, it is clumsy English, or rather it is not English at all. The single words, it is true, belong to our language; but we do not thus put them together—it is not the way we talk. This alone is a sufficient reply in one aspect of the matter. Translation is from one language into another—not simply from the words, but from whatever is peculiar in one language to what is peculiar in another—it is from good Greek to good English—not to the barbarous dialect of the school-room, which is often neither Greek nor English, nor any thing else, but a jargon that might have confounded Babel itself, but to good English, such as a good writer or speaker would use, if he meant to express the idea in his own tongue, without any thought of another language.

And here we might digress on the importance of correct and elegant translation as one of the best modes of studying thoroughly and acquiring practically the power, the peculiar power of our own tongue. We might show that the true knowledge of a language is a knowledge of its idioms, and that it is difficult, if not impossible, to acquire these, without the knowledge of some other language, with which to compare it. We might show that for the purpose of such comparison and mastery of our own tongue, nothing is so well fitted as another, and especially an ancient language, remotely differ-

ent from it in its modes of conception and expression. We might show this, and much more than this, but it would be in some respects a digression from our main topic, and the conclusions to be deduced would readily present themselves to the minds of my hearers.

To resume then, that which we have chosen as our model phrase; ἀλγεί τὴν κεφαλὴν and its verbal translation, "*He is in pain as to the head*, or "*he is in pain, the head.*" It is not good English, we say, and we should never use any other if we can help it, either in the recitation room or elsewhere. But secondly, it does not convey the sense. How not, if it be exactly word for word? We answer, because the *unusual* construction in English, gives to a certain part of the idea, a prominence it does not possess in the familiar Greek phrase, whilst it keeps out of view a part of the idea which there most explicitly belongs to it. It has about it a speciality which keeps us from feeling, at first, that this is the usual Greek mode for saying a *man has a head ache*, or that *his head aches*. We put more in the thought than there really is. The pain *may be in his head*, or it may be on *account* of his head. By taking too the article merely as our article, we lose, on the other hand, the possessive sense which is clearly in the Greek usage, or construction, if not in the single word. The pain may be in somebody else's head, or on account of somebody else's head. The difference here may seem slight, yet if carried through all the varieties of expression which separate the two languages, and especially those of a more complicated structure, it becomes immense, making also a vast difference, not only in the ease with which we read the classics, but also in the spirit and feeling with which we read them, as well as in the quantity and quality of the thought we derive from them.

Before proceeding to reason on other positions furnished by our subject, we will take a few more examples, and these of the simplest kind, as more easily remembered, and just as well illustrating our main idea. Every scholar knows that one of the main peculiarities of the Greek language, consists in the varied use of its participle. It stands in the Greek grammar among the parts of speech, very much as it stands in our own; that is, its grammatical power and place resemble those of our own. The same definition would in general apply to it, as participating of the nature of an adjective and a verb. It is a compound of action and quantity. In theory, the grammatical difference is slight, in practice, however, it is very great. In Greek, the action element is greatly predominant; in English the qualifying, or epithetical, is its chief use. In Greek it claims affinity with the verb, and might with much propriety be reckoned among

its forms. In English it holds a closer relationship with the other parent. Hence, as one might expect, it is much more frequent in the former language, and employed in a much greater variety both of forms and constructions. It is sometimes used for the verb itself. It not unfrequently conveys an assertion. It is sometimes the main or dominant word in a sentence; the verb, though grammatically governing, yet still performing only a qualifying and subordinate office, as in the phrases, *ἐλάνθανε ἄκρως*, "*He did it secretly.*" *ἔκρησεν*. "*He fled away.*" *οὐχ ὅσον φθονοῖς τοῖσιν*. "*You could not be too quick about it.*" The participle often shows the method or manner, sometimes the reason of the action. It often indicates, moreover, a condition. It frequently expresses the time.

In this manner a great many participles are sometimes combined in one Greek sentence, each performing a different office, and this variety all heightened by the difference of tense as implying *description*, *narration*, *motive*, *reason*, or method of proceeding, according as such tense is continuous or aorist. Now to take such a sentence and render it according to the method condemned, word for word, that is, participle for participle throughout, would, in most cases be to the loss, not only of the force or vivacity, but often to the very ruin of the idea. It would be at the best, a most miserably poor, bald and pointless representation, to say nothing of the fact that it would not be simply poor English, but no English at all.

Nothing in teaching can be more painful, whether to the pupil or the teacher, than such a mode of rendering. It may be said the student has the meaning, but this apology is not true either in its application to translation, or to writing or speaking in general. What one can not *express*, he does not *know*. It may be a *feeling*, an *instinct*, it may be what some would call an *inspiration*,—it may be a very fine thing; but it is not *knowledge*. It is not entitled to this name until it lies before his own mind, and can be transmitted to other minds in "good forms of sound words," like "apples of gold in pictures of silver." But especially is this true in translating. No mind ever fully has a meaning, until it has the one best form of language to express it in. Until there come this one good form of sound words, there is ever a haze about the thought, and when the true light breaks in, and every part of the complex Greek sentence lies distinctly out, not only in uncouth solecisms of single English words, but in the choice corresponding English idioms, then there is felt a pleasure which makes it evident that, before this, the real sense or thought was not perceived, much less its full force and true accompanying emotion received into the soul.

Now it is this pressure on the mind of the student that makes the

difficulty to which we have adverted, as one of the greatest obstacles to his progress. This false, cloudy, laborious method of construing, is ever in the way of that facility in taking the sense which is essential to pleasant and therefore, to extensive reading. It has pained our very soul, sometimes, to hear ingenuous pupils complain, and justly complain, of the long and toilsome difficulties in their way. Author after author is read, but each new one gives the same trouble. Each long sentence costs the same study. The lexicon, the grammar, the explanation of the text-book are ever in demand. Old words have to be looked up again and again, because the student cannot be certain that a different construction, or a different idiom, may not require a different meaning to be guessed out from among the multitude given in his dictionary. And so he goes on year after year, in the same hopeless and even despairing road.

Now this need not be so. Greek is a clearer language in itself, than the English. Greek writers do certainly present their ideas more distinctly, or else they have more distinct ideas than English writers, even the best of them. Plato is more perspicuous than Sir William Hamilton; and even to come nearer home, we do not hazard much in saying that it is easier to get *sense*, clear sense, good sense, out of Demosthenes, or certainly out of Cicero, than from a modern speech in Congress. But the fact avails the student nothing, while pursuing this vicious method. When shall I, he exclaims in almost despair, when shall I be able to read Greek with something of the same ease with which I read English? What is in the way, that after years of faithful study I cannot read Euripides and Homer with something of the same satisfaction I find in reading Shakespeare and Milton! It can be done we say, if the right method is only taken. Shakespeare and Milton are more difficult authors, more obscure,—their thoughts, however sublime they may be, are not as vivid, not as clearly intelligible—their language though the best the English can afford, is far from being so radiant a vehicle of thought, so transparent to the very root and fibre, as the “burning words,” in which lie so distinctly envisaged the ideas and emotions of the Grecian dramatist. And yet there is one best English expression for those ideas, but here lies the great difficulty. The student has never had it enjoined upon him, as his chief business in studying Greek, to seek that one best English mode of expression, and ever to employ it, however much it might vary from the Greek construction, until it presented itself spontaneously to his mind, and ran smoothly into the current of his thinking, and thus became as easy and as well remembered a representation of the corresponding Greek idiom, as ever single word in ~~the~~ language represented single word in another.

This might be done, had the student been ever accustomed, from the start, even from his first lesson in construing, to the simple common sense principle involved in the formula,—*idiom for idiom, this is the Greek mode of saying a thing, and this is the English mode of saying the same thing.* You see the teacher might say to the boy, they not only employ different sounds, or words, but different modes of combining them, varying sometimes slightly, sometimes widely, but in all cases it is your business, not only to know what Greek words correspond the nearest to what English words, and what Greek parts of speech to what English parts of speech; but also what English *idioms* are the best representatives of what Greek *idioms*, and always render accordingly. Otherwise you only learn one half, and the poorest half of what ought to be learned in the study of a language. You must not, therefore, translate ἀλγῶσιν τὴν κεφαλὴν, "*he is in pain as to the head,*" but *he has a head ache*, or "*his head aches.*" It is now translated, not into that barbarous dialect, the school boy English, but into good though plain English, into idiomatic English, all the better for being plain and idiomatic. We would even go so far as to say, that among different equivalents for a Greek sentence all of which might be good English, that should be preferred which is most markedly idiomatic, in order that the two languages might thereby exhibit each its own peculiar force, in the most direct, and, therefore, reciprocally suggesting contrast of expression.

So also, to use our other familiar examples, he should not be allowed to say, ὤχρητο πλῆυν—"He went away sailing," which gives a turn to the thought that was never meant; (the Greek verb being here only a qualifying word of distance,) but "*he sailed away.*" So, ἐλάμβανεν ἐπύρρων not "*he concealed doing it,*" which gives hardly any idea at all; but "*he did it secretly;*" οἱ ρύπτοντες, not "*those striking,*" as the boys will have it; but "*they who strike,*" making the rendering of this very common Greek construction of participle and article, by a verb with a relative pronoun, and allowing of no departure from the rule. It may seem a small matter, and a small difference, but we would recommend to a teacher never to allow a deviation even in so simple a case as this. There is no other way to make the practice habitual, so as to come without thinking, and thus secure the higher benefit which comes from rigidly carrying out the principle of idiom for idiom in the easiest, as well as in the most complicated cases. This little example occurs to our mind, because we know of hardly any thing in teaching Greek that we have had so frequently to repeat. Boys somehow get an inveterate habit of rendering the participle and the article in this clumsy way. Οἱ ρύπτοντες, "*those striking,*" they will say again and again, if corrected a dozen times in a recitation.

Nothing like patience; yet still, if the habit cannot be cured any other way, I would not hesitate to recommend a little of the old fashioned kind of moral suasion in the form of a slight application of *τίσις* to the heedless delinquent. In other words, give him some of that same medicine that made Dr. Johnson such a capital Latin scholar. But to come back again to our familiar example,—as *ἀλγες* represents our word to *ache*, and *κεφαλή* our word *head*; so the Greek idiom, or mode of speech, represents the English idiom. The idioms, are more exact equivalents than the single words; for what is lost or overruns in the failure of exact agreements between single words (and hardly any words exactly correspond in different languages, except the names for the merest outward things,) this overrunning in deficiency we say, may be, and generally is, exactly balanced in the antithetical correspondence of the two idiomatic combinations. In the process condemned, the student learns only that certain English words represent, or nearly represent, certain Greek words. On the other method, he learns another and more important fact, the *idiomatic equivalence*. In the vicious mode of *construing*, this is kept entirely out of sight. The English idiom is unthought of, of course; the Greek idiom *which can only be learned by contrast* is unknown as an idiom, and thus the student may go on for years and years without knowing it, or thinking about it, because there has been no such contrast of opposing constructions, as well as differing words, to call it to mind. In carrying out such a method of reading, the English peculiarities are all sacrificed to the Greek, and hence, the Greek itself is unknown in all those higher elements which characterize it in distinction from the English.

But in the Latin method there is a further and more important advantage. It is this. The sentence has a double hold upon the memory. As word suggests word, and helps to remember it, so idiom suggests idiom; and this is the stronger mnemonical power, because more directly connected with the combinations of idea than with the mere associations of sounds. It belongs to a deeper department of the soul, below the mere sense or conceptual memory, and hence, this suggesting contrast of idioms, may remain much longer than the mere verbal association that connects *κεφαλή* and head, or *ἄλγες* and pain. It will come more readily back if one should have become rusty in a language, as is sometimes said; and the idiomatic forms thus coming back will the more easily bring back with them the single words which are but the filling up. Let a man have once learned Greek as he ought, and he will find no great difficulty in recovering it, even although he may have forgotten almost all the words.

(To be continued.)

VI. EDUCATIONAL BIOGRAPHY.

Hail! tolerant teachers of the race, whose dower
Of spirit-wealth outweighs the monarchs might,
Blest be your holy mission! may it shower
Blessings like rain, and bring by human right
To all our hearts and hearths, love, liberty, and light.

WE propose to devote a portion of our columns from time to time, to a series of Biographical Sketches of Eminent Teachers and Educators, who in different ages and countries, and under widely varying circumstances of religion and government, have labored faithfully and successfully in different allotments of the great field of human culture. We hope to do something in this way to rescue from unmerited neglect and oblivion the names and services of many excellent men and women, who have proved themselves benefactors of their race by shedding light into the dark recesses of ignorance and by pre-occupying the soil, which would otherwise have been covered with the rank growth of vice and crime, with a harvest of those virtues which bless, adorn, and purify society. Such men have existed in every civilized state in past times. "Such men," remarks Lord Brougham, "men deserving the glorious title of teachers of mankind, I have found laboring conscientiously, though perhaps obscurely, in their blessed vocation, wherever I have gone. I have found them, and shared their fellowship, among the daring, the ambitious, the ardent, the indomitably active French; I have found them among the persevering, resolute, industrious Swiss; I have found them among the laborious, the warm-hearted, the enthusiastic Germans; I have found them among the high-minded but enslaved Italians; and in our own country, God be thanked, their numbers every where abound, and are every day increasing. Their calling is high and holy; their fame is the property of nations; their renown fill the earth in after ages, in proportion as it sounds not far off in their own times. Each one of these great teachers of the world, possessing his soul in peace, performs his appointed course, awaits in patience the fulfillment of the promises, resting from his labors, bequeathes his memory to the generation whom his works have blessed, and sleeps under the humble, but not inglorious epitaph, commemorating 'one in whom mankind lost a friend, and no man got rid of an enemy!'"

We cannot estimate too highly the services rendered to the civilization of New England, by her early teachers, and especially the teachers of her Town Grammar Schools. Among these teachers we must include many of her best educated clergymen, who, in towns where there was no endowed Free or Grammar School, fitted young men of piety and talent for college, and for higher usefulness in church and state. To her professional teachers and clergy it is due, that schools of even an elementary grade were established and maintained. But for them the fires of classical learning, brought here from the Public Schools and Universities of England, would have died out, the class-rooms of her infant colleges would have been deserted, her parishes would have ceased to claim a scholar for their minister, the management of affairs in town and state would have fallen into incompetent hands, and a darkness deeper than that of the surrounding forests would have gathered about the homes of the people. In view of the barbarism into which the second and third generations of new colonies seem destined to fall, "where schools are not vigorously encouraged," we may exclaim with the Rev. Dr. Mather—

"Tis Corlet's pains, and Cheever's, we must own,
That thou New England, are not Scythia grown."

Let us then hasten to do even tardy justice to these master builders and workmen of our popular civilization. In the language of President Quincy, when about to review the History of Harvard College for a period of two centuries—"While passing down the series of succeeding years, as through the interior of some ancient temple, which displays on either hand the statues of distinguished friends and benefactors, we should stay for a moment in the presence of each, doing justice to the humble, illustrating the obscure, placing in a true light the modest, and noting rapidly the moral and intellectual traits which time has spared; to the end that ingratitude the proverbial sin of republics, may not attach to the republic of letters; and that, whoever feeds the lamp of science, however obscurely, however scantily, may know, that sooner or later, his name and virtues shall be made conspicuous by its light, and throughout all time accompany its lustre."

We commence our Educational Biography—as we propose to designate the series—with a Sketch, such as we have been able to draw up from scanty materials, gleaned from torn and almost illegible records of town, and church, and from scattered items in the publications, pamphlets, and manuscripts of Historical Societies, Antiquarians, and Genealogists—of Ezekiel Cheever, the Father of Connecticut School-masters, the Pioneer, and Patriarch of elementary classical culture in New England.

VII. BIOGRAPHY OF EZEKIEL CHEEVER.

WITH NOTES

ON THE EARLY FREE, OR GRAMMAR SCHOOLS OF NEW ENGLAND.

EZEKIEL CHEEVER, the son of a linen draper of London, was born in that city on the 25th of January, 1614. Of his education and life in England, we find no mention; or any memorial except copies of Latin verses,* composed by him in London, between the years 1631 and 1637, and manuscript dissertations, and letters written in Latin, now in the Boston Athæneum. The pure Latinity of these performances, indicate that he enjoyed and improved no ordinary opportunities of classical training. He came to this country in 1637, landing at Boston, but proceeding in the autumn of the same, or the spring of the following year, with Theophilus Eaton, Rev. John Davenport, and others, to Quinnipiac, where he assisted in planting the colony and church of New Haven—his name appearing in the "Plantation Covenant," signed in "Mr. Newman's Barn," on the 4th of June, 1639, among the principal men of the colony. He was also chosen one of twelve men out of "the whole number thought fit for the foundation work of a church to be gathered," which "elect twelve" were charged "to chose seven out of their own number for the seven pillars of the church," that the Scripture might be fulfilled "*Wisdom hath builded her house, she hath hewn out her seven pillars.*"

From various considerations it is thought that he held the office of deacon in the first church of New Haven, from 1644 to 1650, and sometimes conducted public worship. In May 1647, among other "gross miscarriages," charged upon one "Richard Smoilt, servant to Mrs. Turner,"—for the aggregate of which he was "severely whipped," was his "scoffing at the Word of God," as preached by Mr. Cheevers." He was held in such esteem by the "free burgesses," as to be elected one of the "Deputies" from New Haven, to the General Court in October 1646.

He commenced there his career as a schoolmaster in 1638, which he continued till 1650, devoting to the work a scholarship and personal character which left their mark for ever on the educational policy of

* "A Selection from the Poems of Cheever's Manuscripts" appended to an edition of Rev. Dr. Mather's *CORDERIUS AMERICANUS*, or Funeral Sermon upon Mr. Ezekiel Cheever, published in Boston, by Dutton and Wentworth, 1833.

New Haven.* His first engagement was in the only school, which was opened within the first year of the settlement of the colony, to which the "pastor, Mr. Davenport, together with the magistrates," were ordered "to consider what yearly allowance is meet to be given to it out of the common stock of the town." In 1641, a second and higher grade of school was established, under Mr. Cheever's charge, to which the following order of the town meeting refers :

"For the better training of youth in this town, that, through God's blessing, they may be fitted for public service hereafter, in church or commonwealth, it is ordered that a free school be set up, and the magistrates with the teaching elders are entreated to consider what rules and orders are meet to be observed, and what allowance may be convenient for the schoolmaster's care and pains, which shall be paid out of the town's stock."

By Free Schoole† and Free Grammar School,‡ as used in this extract,

* To the bright example of such a teacher, and especially to the early, enlightened, and persevering labors of the Rev. John Davenport, the first pastor of the first Church of New Haven, and of Theophilus Eaton, the first Governor of the Colony, is New Haven indebted for the inauguration of that educational policy which has made it a seat of learning from its first settlement for the whole country. The wise forecast and labors of these men contemplated, and to some extent realized; 1. Common Town Schools, where "all their sons may learn to read and write, and cast up accounts, and make some entrance into the Latin tongue." 2. A Common, or Colony School, with "a schoolmaster to teach the three languages, Latin, Greek, and Hebrew, so far as shall be necessary to prepare them for the college." 3. A Town or County Library. 4. A College for the Colony, "for the education of youth in good literature, to fit them for public service in church and commonwealth." The whole was made morally certain by the employment of good teachers from the start. After the retirement of Mr. Cheever from the school, the records of the Town are full of entries showing the solicitude of the Governor and Minister in behalf of the schools and the education of the children and youth. Under date of Nov. 8, 1652: "The Governor informs the court that the cause of calling this meeting is about a schoolmaster," that "he had written a letter to Mr. Bower, who as a schoolmaster at Plymouth, and desires to come into these parts to live, and another letter about one Rev. Mr. Landson, a scholar, who he hears will take that employment upon him,"—and "that now Mr. James was come to town, who would teach the boys and girls to read and write"—"and there would be need of two schoolmasters—for if a Latin schoolmaster come, it is found he will be discouraged, if many English scholars come to him." About the same date: "The town was informed that there is some motion again on foot concerning the setting up of a College here at New Haven, which, if attained will in all likelihood, prove very beneficial to this place"—"to which no man objected but all seemed willing." At a General Court of the Colony, held at Guilford, June 28, 1652, "it was thought [the establishment of a college for New Haven Colony] to be too great a charge for us of this jurisdiction to undergo alone. But if Connecticut do join, the planters are generally willing to bear their just proportion for creating and maintaining of a college there [New Haven]." "At a town meeting, held February 7, 1667 ('8), Mr. John Davenport, Senior, came into the meeting, and desired to speak something concerning the [Grammar] school; and first propounded to the town, whether they would send their children to the school, to be taught for the fitting them for the service of God, in church and commonwealth. If they would, then, the grant [made by Mr. D. in 1660, as Trustees of the Legacy of Gov. Hopkins] formerly made to this town, stands good; but, if not, then it is void: because it attains not the end of the donor. Therefore, he desired they would express themselves." Upon which several townsmen declared their purpose "of bringing up one or more of their sons to learning," and as evidence of the sincerity of their declaration, and of the former efforts of Gov. Eaton and Mr. Davenport, in favor of liberal education, Prof. Kingsley in his Historical Discourse, on the 200th Anniversary of the First Settlement of the Town, remarks:—"Of the graduates of Harvard College, from its foundation to year 1700 [the founding of Yale College], as many as one in thirty, at least, were from the town of New Haven"—with a population, so late as the year 1700, of only five hundred persons.—See *Barnard's History of Education in Connecticut*, 1833.

† The first establishment of the FREE SCHOOL—or School for the gratuitous instruction of poor

and in the early records both of towns and the General Court in Connecticut and Massachusetts, was not intended the Common or Public School,

children can be traced back to the early ages of the Christian Church. Wherever a missionary station was set up, or the Bishops' residence or Seat (*cathedra*, and hence *Cathedral*) was fixed, there gradually grew up a large ecclesiastical establishment, in which were concentrated the means of hospitality for all the clergy, and all the humanizing influences of learning and religion for that diocese or district. Along side of the Cathedral, and sometimes within the edifice where divine worship was celebrated, "a song school," where poor boys were trained to chant, and the "lecture school," where clerks were taught to read the sacred ritual, and in due time the "grammar school" when those who were destined for the higher services of church and state were educated according to the standard of the times, were successively established. The monasteries were also originally seats of learning, as well as places of religious retirement, of hospitality for the aged and infirm, and of alms for the poor of the surrounding country. Their cloister schools were the hearth-stones of classical education in every country of Europe, and were the germs of the great Universities, which were encouraged and endowed by learned prelates and beneficent princes for the support and exaltation of the Christian faith and the improvement of the liberal arts. But for the endowments and the ordinances and recommendations of early synods and councils, these schools might have been accessible only to the children of the titled and the wealthy. The council of Lyons in 1215, decreed "that in all cathedral churches and others provided with adequate revenues, there should be established a school and a teacher by the bishop and chapter, who should teach the clerks and poor scholars gratis in grammar, and for this purpose a stipend shall be assigned him;" and the third council of Lateran still earlier ordained—"that opportunity of learning should not be withdrawn from the poor, who are without help from patrimonial riches, there shall be in every cathedral a master to teach both clerks and poor scholars gratis." In the remodelling of the cathedral establishments, and the demolition of the monasteries by Henry VIII., and his successors, several of the cathedral schools were provided for, and Royal Grammar Schools founded out of the old endowments.—See *Barnard's National Education in Europe*.

‡ The names, by which the various educational institutions in the colonies were designated in the early records and laws on the subject, were adopted with the institutions themselves from the fatherland, and must be interpreted according to the usage prevailing there at the time. By a *Grammar School*—whether it was a continuation of the old Grammar School of the Cathedral, or the Cloister School of the Monastery, in some cases dating back even beyond the reign of Alfred—or newly endowed by Royal Authority out of the spoils of the religious houses, by Henry VIII., Elizabeth, or Edward VI.—or established by benevolent individuals afterwards—was meant a school for the teaching of Greek and Latin, or in some cases Latin only, and for no other gratuitous teaching. A few of the poor who were unable to pay for their education were to be selected—some according to the parish in which they were born or lived, some on account of the name they bore,—and to receive instruction in the learned languages, and under certain conditions to be supported through the university. These Public Grammar schools were thus the nurseries of the scholars of England, and in them the poor and the rich, to some extent enjoyed equal advantages of learning, and through them the way to the highest honors in the state, and the largest usefulness in the church was opened to the humblest in the land.—See *Barnard's National Education in Europe*.

"*Considerations concerning Free Schools as settled in England*" by Christopher Wase, published in Oxford, 1678. Carlisle's "*Endowed Grammar Schools in England and Wales*," 2 vols, London, 1818. Ackermanns, "*History of the Principal Schools of England*," London, 1816. Parliamentary Reports of Commissioners to enquire into the Endowed Charities of England and Wales from 1836 to 1860.

The Free Schools of England were originally established in towns where there was no old Conventual, Cathedral, Royal or Endowed Grammar School. With very few exceptions these schools were founded and endowed by individuals, for the teaching of Greek, and Latin, and for no other gratuitous teaching. The gratuitous instruction was sometimes extended to all the children born or living in a particular parish, or of a particular name. All not specified and provided for in the instruments of endowment paid tuition to the master.

The total value of Endowed Charities for Education in England and Wales, including the Grammar and Free Schools, and excluding the Universities and Great Public Schools of Eton, &c., according to a late report of the Commissioners for Inquiry into their condition, is returned at £75,000,000, and the annual income at £1,209,395, which, by more judicious and faithful management, it is estimated, can be raised to £4,000,000, or \$30,000,000 a year.—*Barnard's National Education in Europe*, P. 736.

as afterwards developed, particularly in Massachusetts, supported by tax, and free of all charge to all scholars rich and poor; neither was it a Charity School, exclusively for the poor. The term was applied here, as well as in the early Acts of Virginia* and other states, in the same sense, in which it was used in England, at the same and much earlier dates, to characterize a Grammar School unrestricted as to a class of children or scholars specified in the instruments by which it was founded, and so supported as not to depend on the fluctuating attendance and tuition of scholars for the maintenance of a master. In every instance in which we have traced their history, the "free

* The Virginia Company in 1619, instructed the Governor for the time being to see "that each Town, Borough, and Hundred procured, by just means, a certain number of their children, to be brought up in the first elements of literature: that the most towardly of them should be fitted for college, in the building of which they proposed to proceed as soon as any profit arose from the estate appropriated to that use; and they earnestly required their utmost help and furtherance in that pious and important work." In 1621, Mr. Copeland, chaplain of the Royal James, on her arrival from the East Indies, prevailed on the ships company to subscribe £100 toward "a free schoole," and collected other donations of money and books for the same purpose. The school was located in Charles City, as being most central for the colony, and was called "*The East India School*." The company allotted 1000 acres of land, with five servants and an overseer, for the maintenance of the master and usher. The inhabitants made a contribution of £1500 to build a house, &c.

A second Free School was established in Elizabeth City in 1642; although Gov. Berkeley, in 1670, in reply to the Question of the Commissioners of Foreign Plantations, "what course is taken about instructing the people within your government in the Christian religion; and, what provision is there made for the paying of your ministry?" answered as follows:—

"The same course that is taken in England out of towns; every man, according to his ability, instructing his children. We have forty-eight parishes, and our ministers are well paid, and, by my consent, should be better, if they would pray oftener, and preach less. But, of all other commodities, so of this, the worst are sent us, and we have had few we could boast of since the persecution in Cromwell's tyranny drove pious, worthy men here. But, I thank God, there are no free schools, nor printing, and, I hope we shall not have these hundred years; for, learning has brought disobedience, and heresy, and sects into the world, and printing has divulged them, and libels against the best government. God keep us from both!"

To the same question the Governor of Connecticut, replied: "Great care is taken for the instruction of the people in the Christian Religion, by the ministers catechising of them and preaching to them twice every Sabbath day, and sometimes on Lecture days, and also by masters of families instructing and catechising their children and servants, being required so to do by law. There is in every town, except one or two new towns a settled minister, whose maintenance is raised by rate, in some places £100, in some £20, &c." In a subsequent answer to similar questions the Governor states that one-fourth of the annual revenue of the Colony, "is laid out in maintaining free [common] schools for the education of our children."

The first school established in Manhattan [New York], was by the West India Company, in 1633. This was an Elementary Parochial School under the management of the deacons of the Dutch Church, and is still continued. The first "Latin Schoolmaster" was sent out by the Company in 1659. In 1702 a "Free Grammar School" was partially endowed on the King's farm; and in 1730 a "Free School for teaching the Latin and Greek and practical branches of mathematics" was incorporated by law. The bill for this school, drafted by Mr. Philipps, the Speaker, and brought in by Mr. Delancey, had this preamble: "Whereas the youth of this Colony are found by manifold experience, to be not inferior in their natural genius, to the youth of any other country in the world, therefore be it enacted, &c."—See *Dunster's History of the School of the Reformed Protestant Dutch Church*. 1863. *Smith's History of New York*.

The first school Act of Maryland was passed in 1694, and is entitled a "Supplicatory Act to their sacred Majesties for erecting of Free Schools," meaning thereby the endowment of "schools, or places of study of Latin, Greek, writing, and the like, consisting of one master, one usher, and one writing master," &c.

schools" of New England were endowed by grants of land, by gift and bequests of individuals, or by "allowance out of the common stock of the town," were designed especially for instruction in Latin

* The earliest mention of the establishment of "free schools" by Gov. Winthrop, in his History of New England, is under date of 1645, in the following language: "Divers free schools were erected, as at Roxbury, (for maintenance whereof every inhabitant bound some house or land for a yearly allowance for ever) and at Boston (where they made an order to allow 50 pounds to the master and an house, and 30 pounds to an usher, who should also teach to read, and write, and cipher, and Indians' children were to be taught freely, and the charge to be by yearly contribution, either by voluntary allowance, or by rate of such as refused, etc., and this order was confirmed by the general court [blank]. Other towns did the like, providing maintenance by several means." Savage's Winthrop, Vol. II, p. 215.

We know by the original documents published by Parker in his "Sketch of the History of the Grammar School in the Easterly Part of Roxbury," the character of the Free School erected in that town. It was an endowed Grammar School, in which "none of the inhabitants of the said town of Roxbury that shall not join in this act (an instrument, or subscription paper, binding the subscribers and their estates for ever to the extent of their subscription "to erect a free schoole" "for the education of their children in Literature to fit them for publicke service, bothe in the Church and Commonwealthe, in succeeding ages,") with the rest of the Donors shall have any further benefit thereby than other strangers shall have who are not inhabitants." The school thus established was a Grammar School, as then understood in England, and was free only to the children of those for whom, or by whom it was endowed, and only to the extent of the endowment. This school, although not till within a few years past a Free School, or part of the system of Public Schools, according to the modern acceptation of the term, has been a fountain of higher education to that community and the state.

The early votes establishing and providing for the support of the "free schools" in Boston, as well as in other towns in Mass., while they recognize, by grants of land and allowance out of the common stock, the interest and duty of the public in schools and universal education, also provide for the payment by parents of a rate or tuition. Among the earliest assignments of lands in Boston was a "garden plott to Mr. Danyell Maude, schoolemaster," in 1637; a tract of thirty acres of land at Muddy Brook, (now part of Brookline), to Mr. Perment, (or Permont, or Porment,) who, in 1635, was "intreated to become schoolemaster for the teaching and nurturing of children with us." In 1641, "it is ordered that Deare Island be improved for the maintenance of Free Schoole for the towne." In 1654, "the ten pounds left by the legacy to ye schoole of Boston, by Miss. Hudson, deceased," is let to Capt. Olliver. Under date of August 6, 1636, there is, in the first volume of the Town Records of Boston, a subscription "towards the maintenance of free schoolemaster, Mr. Daniel Maude, being now chosen thereunto." In the provision made in 1645, it is provided that "Indian children shall be taught gratis;" implying that tuition was, or might be, exacted from all others. In 1650, "it is also agreed on that Mr. Woodmansy, ye schoolmaster, shall have fifty pounds p. an. for his teaching ye schollars, and his p. portion to be made up by rate." In a vote passed 1682, authorizing the selectmen to establish one or more "free schooles to teach children to write and cypher"—the Committee with the Selectmen allow £25 per annum for each school, "and such persons as send their children to school (that are able) shall pay something to the master for his better encouragement in his work."

Mr. Felt in his Annals of Salem, has given transcripts from the records of that town, which show the gradual development of the Free School, from an endowed school, devoted principally to preparing young men for college, and free only to poor but bright children, who gave promise of becoming good scholars—into a system of public schools, for children of all ages, and of every condition and prospects in life, supported entirely by property tax or public funds. In 1641, at the Quarterly Court, Col. Endicott moved "a free skoule and therefore wished a whole town meeting about it." In 1644 it is "Ordered that a note be published one the next lecture day, that such as have children to be kept at schoole, would bring in their names and what they will giue for one whole yeare and, also, that if any poore body hath children or a child, to be put to schoole and not able to pay for their schooling, that the towne will pay it by a rate." In 1670, the selectmen are ordered "to take care to provide a Grammar school master, and agree with him for his mayntenance." He was to have £30 a year from the town, and "half pay for all scollers of the towne, and whole pay from strangers." In 1677, "Mr. Daniel Eppes is called to bee a grammar schoolemaster," "provided hee may have what shall be annually allowed him, not be a town rate, butt in

and Greek, and were supported in part by payments of tuition or rates by parents. These schools were the well-springs of classical education in this country, and were the predecessors of the incorporated Academies which do not appear under that name until a comparatively recent period.

The only Free Schools provided for in the early legislation of Connecticut were town or county Grammar Schools, to prepare young men for college; and instruction in these schools was not gratuitous. "Beyond the avails of any grant of land, endowment, legacy, or allowance from the common stock," parents, who were able, were assessed a certain rate according to the number and time of attendance of children sent. Thus, under the order of the town-meeting of New Haven, in 1641, above cited, "twenty pounds a year was paid to Ezekiel Cheevers, the present school-master, for two or three years, at first. But that not proving a competent maintenance, in August, 1644, it was enlarged to thirty pounds a year, and so continueth;" and, that this allowance was not all that the school-master received is evident from the following entry, under date of July 8, 1643: "Mr. Cheevers desired 4 - 3 - 6 out of the estate of Mr. Trobridge, wch is justly due to him for teaching of children." This mode of supporting schools was continued in Connecticut in respect to public schools of every grade; a mode which recognizes at once the duty of the parent or guardian of children, and of the public, and encourages endowments so far as not to weaken the sense of parental and public responsibility as to education. Under this system, for one hundred and fifty years prior to the beginning of the present century, Connecticut solved the great problem of universal education so that in 1800 a

some other suitable way." In 1699, "each scholar is to pay 12d a month, and what this lacked should be made up out of the "funds sett apart for ye Grammar schools." In 1713, "the committee perceiving that 2s a quarter for each boy of the Latin and English schools, in the body of the town, was insufficient, agreed that it should be 2/6 in money, payable at the commencement of the term. Every scholar that goes in the winter, to find three feet of wood, or to pay to their masters 4/6 in money, to purchase wood withal." In 1729, "Samuel Brown grants unto the Grammar school in Salem, to be kept in or near the town house street, £150 passable money, to make the same a free school, or towards the educating of eight or ten poor scholars, yearly, in the Grammar learning or the mathematics, viz: the mariner's art; the interest thereof to be improved only for that end forever, as a committee, chosen by the town of Salem, for the taking care of said school may direct, with the advice of the minister or ministers of the first church and myself or children or two of the chief of their posterity. Mr. Brown then stated, that he gave £60 to the English school so that its income might be applied 'towards making the same a free school, or for learning six poor scholars;' and a like sum 'to a woman's school, the interest thereof to be yearly improved for the learning of six very poor children their letters and to spell and read, who may be sent to said school six or seven months in the year.' He required, that the two last donations should be managed by the same trustees as the first." By slow degrees the system was expanded so as to embrace Evening Schools for children who cannot attend the day Schools, Primary Schools for young children, Intermediate Schools, English High Schools for Girls, English High School for Boys, and a Latin School.

family, "which had suffered so much barbarism as not teach by themselves or others, their children and apprentices so much learning as may enable them to read the English tongue," or even an individual "unable to read the Holy Word of God, and the good laws of the Colony," was not to be met with.*

Mr. Cheever removed to Ipswich, in Massachusetts, in November, 1650, and took charge of the Grammar School, which was established and supported in the same manner as similar schools in other parts of New England. Public spirited individuals made donations, and the Town early set apart land "toward the building and maintaining of a Grammar Schoole and schoole-master," and in 1652 appointed a committee "to disburse and dispose such sums of money as have or may be given" for these objects, with power to enlarge the maintenance of the master, "by appointing from yeare to yeare what each scholar shall yearly or quarterly pay or proportionably." Of his labors here as a teacher, we have been able to gather no memorial—except that from an entry† under date of 1661, it appears that his agricultural operations required a barn, and that he planted an orchard on his homestead—thereby improving the soil of Ipswich as well as the souls of her children, by healthy manual labor. It is to be regretted that the early practice of attaching a house for the occupancy of the master, with a few acres of land for garden, orchard, and the feeding of a cow, adopted with the school from the old world, was not continued with the institution of new schools, down to the present time. It would have given more of professional permanence to the employment of teaching, and prevented the growth of that "barbarism of boarding round," which is still the doom of

*That the same system of Common or Public Schools prevailed in Massachusetts, is not only evident from the early records of Boston, Ipswich, Roxbury, Charlestown, and Salem and other towns in that colony, but it is expressly provided for in the first formal order on the subject of schools, enacted in 1647—"It is therefore ordered y^t every township in this jurisdiction after y^e Lord hath increased y^m to y^e number of 50 householders shall then forthwith appoint one within their towne to teach all such children, as shall resort to him to write and reade, whose wages shall be paid either by y^e parents or masters of such children, or by y^e inhabitants in general by way of supply, as y^e maior part of those y^t order y^e prudentials of y^e towne shall appoint, provided those y^t send their children be not oppressed by paying much more y^m they can have y^m taught for in other towne."

From that time to the present, the laws of the Colony and the State, have made it obligatory on towns to establish and sustain schools, but for near a century and half left them free as to the mode of paying the teacher and providing the incidental expenses of the school. Even after it was made compulsory on the town to keep a literally free school for a certain number of months in each year, out of a tax collected with other taxes of the town, the same school in a majority of the country districts was continued as a subscription or pay school under the same teacher, by the payment by parents of a certain rate for the number of scholars sent. The term of the free school was also prolonged by the system of boarding the teacher round in the families of the district, and by contributions of a certain quantity of wood for each scholar.

† "The barn erected by Ezekiel Cheever, and the orchard planted by him, were after his removal to Charlestown, bought by the scotees, [committee and trustees of the Grammar School] and presented for the use of the master."—*Felt's History of Ipswich*.

the teacher in District Schools in many parts of New England, and operates very powerfully to drive men with families from the service of the public schools.

In November, 1661, Mr. Cheever, after making the Free School at Ipswich "famous in all the country," and thereby, according to Dr. Bentley, making that town rank in literature and population above other towns in the county of Essex, removed to Charlestown, where early efforts had been made to establish a Town Free School, by granting, in 1647, "a rate of fifteen pounds to be gathered of the town," and by the rents of the island," and of "Mystik Wear." Of his labors here we find but scanty memorials. Even in these early days the schoolmaster was not always paid his pittance in due season; did not always find his school-house in good repair, and had reason to complain that other masters "took his scholars," and thereby doubtless diminished his income from rates or quarter bills. On the 3d November, 1666, Mr. Cheever presented the following "motion" to the selectmen:

"First, that they would take care the school house be speedily amended because it is much out of repair.

Secondly, that they would take care that his yearly salary be paid, the constables being much behind with him.

Thirdly, putting them in mind of their promise at his first coming to town, viz. that no other schoolmaster should be suffered, or set up in the town so as he could teach the same, yet now Mr. Mansfield is suffered to teach and take away his scholars."*

After laboring nine years at Charlestown, Mr. Cheever moved over to Boston, Jan. 6th, 1670, where his labors were continued for eight and thirty years—commencing from a period of life when most modern teachers break down. The manner of his engagement to teach the "Free Schoole," which has been known since 1790, as the Latin School,* of Boston, is thus recorded, under the date 22. 10th (December) 1670: "At a Meetinge of the honrd. Govern^r. Richard Bellingham, Esq. Major Generall John Leveret, Edward Tyngs Esq^r Majestrates, Mr. John Mayo, Mr. John Oxenbridge, Mr. Thomas Thatcher, and Mr.

* Frothingham's History of Charlestown, p. 157. In the same year Mr. Frothingham gives an Order of the Selectmen relative to the behavior of children on the Lord's Day, in which Mr. Cheever is introduced: "We judge it our duty to commend it as our affectionate desire to all our inhabitants, concerned herein to further us with their cheerful endeavors, and that each person whom we nominate would in his term sit before the youths pew on Lords day during the morning and evening exercise. It being our joint expectation that all youths under fifteen years of age unless on grounded exemption by us, do constantly sit in some one of those three pews made purposely for them. It is our desire that all parents and governors will require their children and servants of the capacity aforesaid to sit and continue orderly in those pews except mr. Cheevers scholars, who are required to sit orderly and constantly in the pews appointed for them together. It is moreover commended to the conscientious care and endeavour of those that do sit before the youths pews Lords days to observe their carriage, and if any youth shall carry it rudely and irreverently to bring them before one of our magistrates with convincing testimony that due course may be taken with them for the discouragement of them and any others of like profane behavior."

James Allen Eld^{rs}, Capt. Thomas Lake, Capt. Jamss Olliver, Mr. John Richards, and John Joyliffe selectmen of Bostone. It was ordered and agreed that Mr. Ezechiell Chevers, Mr. Tomson & Mr. Hinksmen should be at the Govern^{rs} house that day sevensight to treat with them concerning the free schoole." "At a Meetings of the same gentlemen" as above, with the addition of Mr. Hezekiah Usher, "it was agreed and ordered that Mr. Ezechiell Cheevers should be called to & installed in the free schoole as head Master thereof, which he, being then present, accepted of: likewise that Mr. Thompson should be invited to be an assistant to Mr. Cheevers in his worke in the schoole; wh^{ch} Mr. Tompson, beinge present, desired time to consider of, and to give his answer;—And upon the third day of January, gave his answer to Major Generall Leverett in the negative, he havinge had and accepted of, a call to Charlestowne." On the 6th day of the next month, the same honorable gentlemen, excepting Mr. Usher, "beinge met repaired to the schoole and sent for Mr. Tompson who, when he came, declared his removall to Charlestowne—and resigned up the possession of the schoole and schoole house to the Govern^r & ca, who delivered the key and possession of the schoole house to Mr. Ezechiell Cheevers as the sole Mast^r. thereof. And it was farther agreed that the said Mr. Cheevers should be allowed sixtie pounds p. an. for his service in the schoole, out of the townes rates, and rents that belonge to the schoole—and the possession, and use of y^e schoole house."

* The foregoing transcript from the Town Records are printed from Gould's "*Account of the Free Schools in Boston*," first published in the "Prize Book, No. IV., of the Publick Latin School," in 1823. Mr. Gould (Benjamin A.) was, for twenty-eight years, (1814 to 1838), head master of this school; and, under his administration, it rose from a temporary depression to which it had been gradually falling under his predecessor, into a high state of efficiency, from which it has never again declined. He is still living in the enjoyment of a green old age, which seems to have descended as an heir-loom from Master Cheever to his successors. His Account of the System of Public or Free Schools in Boston was a valuable contribution to the educational literature of the day, and helped to raise public attention in other cities of the state and country to a higher standard of popular education than had been reached or regarded as practicable out of Boston.

The History of "the Free Schools," the public schools and other means of Popular Education generally in Boston, from its first inception in the entreating of "Brother Philemon Pormont to become schoolmaster for the teaching and nurturing of children" in 1634, the setting apart of grants of land, and allowances from the common stock, the protection of trust estates and bequests for school purposes, and the raising of additional maintenance by subscription in 1636 to reduce the rate of tuition in higher, as well as elementary instruction—through all the stages of progress,—the introduction of the dame School, Grammar School, Charity School, Writing School, the admission of girls as well as boys, the Primary School, the English High School, and the Normal School,—the Reformatory and Farm School,—the Library,—Social, Incorporated, and Free,—the Public Press, from the Newsletter of 1704, to the Quarterly, Monthly, Weekly, and Daily issue,—the Debating Class and Public Lecture in all their agencies and helps of self-education and social and literary amusement, as well as of scientific research—a History of Public Schools and Popular Education in Boston from 1630 to 1865, embracing a connected view of all the institutions and agencies which supply the deficiency, and determine the character of the instruction given in the Homes and the Schools of a people, would be one of the most valuable contributions, which could be made to the HISTORY OF AMERICAN CIVILIZATION and the PROGRESS OF SOCIETY

The SCHOOL HOUSE into which Mr. Cheever was installed as the "sole Master," by the Honourable Governor, and Magistrates of the Colony, the Elders of the Churches, and Selectmen of the Town of Boston, and in which he continued to sway "the rod of empire" for thirty-five years over "governors, judges, ministers, magistrates, and merchants yet in their teens," is thus represented.*



The SCHOOL itself under his long, faithful, and distinguished services became the principal classical school not only of Massachusetts Bay, but according to Rev. Dr. Prince, "of the British Colonies, if not of all America."

* For this vignette of Mr. Cheever's School-house, we are indebted to the Rev. Edward E. Hale, of Worcester.

"Cheever's school-house occupied land on the North side of School street, nearly opposite the present Horticultural Hall. It was large enough to contain one hundred and fifty pupils. At the present time, the east wall of the Stone Chapel stands on the site of the old building, which was removed, after much controversy, to make room for the building of the Chapel, in 1748. The outline of the old building, and some general sketch of its appearance appear on an old map of Boston, dated 1722, of which, a copy is now in possession of Mr. Pulsifer, of Boston. On this map, every building was represented, on the spot it occupied, with some effort at precision. From this map Cheever's school-house is represented in this sketch. King's Chapel is drawn from a view of more pretensions, representing the whole town, from a point above the harbor, in 1744. In that view, unfortunately, Cheever's school-house does not appear. As King's Chapel was materially enlarged in 1710, it has been represented here as being, in Cheever's time, somewhat shorter than in the authority alluded to. In an early print, described by Dr. Greenwood, a crown was represented below its vane, which has, therefore, been placed there in this sketch."

Mr. Gould introduces into his notice of the controversy which attended the removal of the old school house, to make room for an enlargement of the church, the following impromptu epigram written by Joseph Green, Esqr., and sent to Mr. Lovell in the School, when it was announced that the town had agreed to grant permission to the proprietors of King's Chapel to take down the old house.

A fig for your learning: I tell you the Town,
To make the church larger, must pull the school down.
Unluckily spoken, replied Master Birch—
Then learning, I fear, stops the growth of the Church.

We are also indebted to the Rev. Edward Everett Hale, for the opportunity of consulting his own "*Notes for a History of the Latin School of Boston*," (in which he has transcribed one of Cheever's Latin Dissertations from the "Cheever Manuscripts," in the Massachusetts Historical Society, and a synopsis of the rest, as well as a letter in Latin to his son, afterward the Rev. T. Cheever, of Marblehead, who had asked his consent to marry a young lady of Salem,) and other valuable memoranda and assistance.

Some light is thrown on the internal economy of the school under Mr. Cheever's charge, of the age at which pupils were admitted, the motives to study and good behavior appealed to, the punishments inflicted, as well as on the importance attached to religious training in the family and the school at that day, in the biographies of several of his pupils who became eminent in after life.

The Autobiography of the Rev. John Barnard, of Marblehead, drawn up by him, in 1766, in the 85th year of his age, at the request of the Rev. Dr. Stiles, of Yale College, and printed for the first time in the Collections of the Massachusetts Historical Society—Third series, Vol. V., p. 177 to 243, contains a sketch of his school experience under Mr. Cheever's tuition, and glimpses of the family and college training of that early day. In the extracts which follow, the chasms are found in the mutilated manuscript, and the words printed in Italics are inserted from conjecture by the Publishing Committee of the Society.

"I was born at Boston, 6th November 1681; descended from reputable parents, viz. John and Esther Barnard, remarkable for their piety and benevolence, who devoted me to the service of God, in the work of the ministry from my very birth; and accordingly took special care to instruct me themselves in the principles of the Christian religion, and kept me close at school to furnish my young mind with the knowledge of letters. By that time I had a little passed my sixth year, I had left my reading-school, in the latter part of which my mistress made me a sort of usher, appointing me to teach some children that were older than myself, as well as smaller ones; and in which time I had read my Bible through thrice. My parents thought me to be weakly, because of my thin habit and pale countenance, and therefore sent me into the country, where I spent my seventh summer, and by the change of air and diet and exercise I grew more fleshy and hardy; and that I might not lose my reading, was put to a school-mistress, and returned home in the fall.

In the spring 1689, of my eighth year I was sent to the grammar-school,

* Of the author of this autobiography, the Rev. Dr. Chauncey, of Boston, in a letter to Dr. Stiles, dated May 6, 1768, says: "He is now in his eighty-seventh year. I esteem him one of our greatest men. He is equalled by few in regard either of invention, liveliness of imagination, or strength and clearness in reasoning." On the burning of the Library of Harvard College, in 1764, he presented many books from his own library, and imported others from England to the value of ten pounds sterling; and, in his will, bequeathed two hundred pounds to the same institution. He died January 24, 1770, in the eighty-ninth year of his age. "Of his charities," he remarks, in his autobiography, "I always thought the tenth of my income due to our great Melchisedeck. My private ones are known unto God; but, there is one way of service I venture to tell you of; I have generally kept two boys of poor parents at school, and, by this means, have been instrumental in bringing up, from unlikely families, such as have made good men, and valuable members of the Commonwealth."

† It appears from this statement that this unnamed school-mistress adopted the monitorial system a century and more before Bell, or Lancaster, or their respective adherents convulsed the educational world of England by their claims to its authorship. She applied the principle of mutual instruction which is as old as the human family, and which has been tried to some extent, in all probability, in the instruction and discipline of many schools in every age of the world. Certain it is, that the system, with much of the modern machinery of monitors, was adopted by Trotzenhof, in Germany, in the sixteenth century, and by Paulet in France, many years before these two champions of an economical system of popular education, by means of one head master, with boys and girls for assistants, in a school of many hundred children, ever set up their model schools in Madras or London.

under the tuition of the aged, venerable, and justly famous Mr. Ezekiel Cheever. But after a few weeks, an odd accident drove me from the school. There was an older lad entered the school the same week with me; we strove who should outdo; and he beat me by the help of a brother in the upper class, who stood behind master with the accidence open for him to read out off; by which means he could recite his * * * three and four times in a forenoon, *and the same in the afternoon*; but I who had no such *help, and was* obliged to commit all to memory, could not keep pace with him; so that he would be always one lesson before me. My ambition could not bear to be outdone, and in such a fraudulent manner, and therefore I left the school. About this time arrived a dissenting minister from England, who opened a private school for reading, writing, and Latin. My good father put me under his tuition, with whom I spent a year and a half. The gentleman receiving *but little encouragement*, threw up his school, and *returned me to my father, and again I was sent to my aged Mr. Cheever, who placed me in the lowest class*; but finding I soon read through my * * * , in a few weeks he advanced me to the * * * , and the next year made me the head of it.

In the time of my absence from Mr. Cheever, it pleased God to take to himself my dear mother, *who was* not only a very virtuous, but a very intelligent woman. *She was* exceeding fond of my learning, and *taught me to pray*. My good father also instructed me, and *made a little closet for me to retire to for my morning and evening devotion*. But, alas! how childish and hypocritical were all my pretensions to *piety, there being little or no serious thoughts of God and religion in me*.

Though my master advanced me, as above, yet I was a very naughty boy, much given to play, insomuch that he at length openly declared, "You Barnard, I know you can do well enough if you will; but you are so full of play that you hinder your classmates from getting *their lessons*; and therefore, if any of them cannot perform *their duty, I shall correct you for it*." One unlucky day, *one of my classmates did not look into his book, and therefore could not say his lesson*, though I called upon him once and again to *mind his book*: upon which our master beat me. I told *master the reason why he could not say his lesson was, his declaring* he would beat me if any of the class were *wanting in their duty*; since which this boy would not look into his book, though I called upon him to mind his book, as *the class could witness*. The boy was pleased with my being corrected, and persisted in his neglect, for which I was still corrected, and that for several days. I thought, in justice, I ought to correct the boy, and compel him to a better temper; and therefore, after school was done, I went up to him, and told him I had been beaten several times for his neglect; and since master would not correct him I would, and I should do so as often as I was corrected for him; and then drubbed him heartily. The boy never came to school any more, and so that unhappy affair ended.

Though I was often beaten for my play, and my little roguish tricks, yet I don't remember that I was ever beaten for my book more than once or twice. One of these was upon this occasion. Master put our class upon turning *Æsop's Fables into Latin verse*. Some dull fellows made a shift to perform this to acceptance; but I was so much duller at this exercise, that I could make nothing of it; for which master corrected me, and this he did two or three days going. I had honestly tried my possibilities to perform the task; but having no poetical fancy, nor then a capacity opened of expressing the same idea by a variation of phrases, though I was perfectly acquainted with prosody, I found I could do nothing; and therefore plainly told my master, that I had diligently labored all I could to perform what he required, and perceiving I had no genius for it, I thought it was in vain to strive against nature any longer; and he never more required it of me. Nor had I any thing of a poetical genius till after I had been at College some time, when upon reading some of Mr. Cowley's works, I was highly pleased, and a new scene opened before me.

I remember once, in making a piece of Latin, my master found fault with the syntax of one word, which was not so used by me heedlessly, but designedly, and therefore I told him there was a plain grammar rule for it. He angrily replied, there was no such rule. I took the grammar and showed the rule to him. Then he smilingly said, "Thou art a brave boy; I had forgot it." And no wonder; for he was then above eighty years old.

Of Mr. Cheever's discipline, we may form some notion from the testimony of his pupils. The following lines from Coote's "English Schoolmaster," a famous manual* of that day in England, may have been the substance of his "school code."

THE SCHOOLMASTER TO HIS SCHOLARS.

"My child and scholar take good heed
unto the words that here are set,
And see thou do accordingly,
or else be sure thou shalt be beat.

First, I command thee God to serve,
then, to thy parents, duty yield;
Unto all men be courteous,
and mannerly, in town and field.

Your cloaths unbuttoned do not use,
let not your hose ungartered be;
Have handkerchief in readiness,
Wash hands and face, or see not me.

Lose not your books, ink-horns, or pens,
nor girdle, garters, hat or band,
Let shoes be tyed, pin shirt-band close,
keep well your hands at any hand.

If broken-hos'd or shoe'd you go,
or slovenly in your array,
Without a girdle, or untrust,
then you and I must have a fray.

If that thou cry, or talk aloud,
or books do rend, or strike with knife;
Or laugh, or play unlawfully,
then you and I must be at strife.

If that you curse, miscall, or swear,
if that you pick, flich, steal, or lye;
If you forget a scholar's part,
then must you sure your points untie.

If that to school you do not go,
when time doth call you to the same;
Or, if you loiter in the streets,
when we do meet, then look for blame.

Wherefore, my child, behave thyself,
so decently, in all assays,
That thou may'st purchase parents love,
and eke obtain thy master's praise."

Although he was doubtless a strict disciplinarian, it is evident, from the affectionate manner in which his pupils, Mather, Barnard, and Colman speak of him, and the traditionary reputation which has descended with his name, that his venerable presence was accompanied by "an agreeable mixture of majesty and sweetness, both in his voice and countenance," and that he secured at once obedience, reverence, and love.

* The following is the title-page of this once famous school-book, printed from a copy of the fortieth edition, presented to the author of this sketch, by George Livermore, Esq., of Cambridge, Mass.

"THE
ENGLISH
SCHOOL-MASTER.

Teaching all his Scholars, of what age so ever, the most easy, short, and perfect order of distinct Reading, and true Writing our English-tongue, that hath ever yet been known or published by any.

And further also, teacheth a direct course, how many unskilful person may easily both understand any hard English words, which they shall in Scriptures, Sermons, or else-where hear or read; and also be made able to use the same aptly themselves; and generally whatsoever is necessary to be known for the *English* speech: so that he which hath this book only needeth to buy no other to make him fit from his Letters to the *Grammar-School*, for an *Apprentice*, or any other private use, so far as concerneth *English*: And therefore it is made not only for Children, though the first book be meer childish for them, but also for all other; especially for those that are ignorant in the *Latin* Tongue.

In the next Page the *School-Master* hangeth forth his Table to the view of all beholders, setting forth some of the chief Commodities of his profession.

Devised for thy sake that wantest any part of this skill; by *Edward Coote*, Master of the Free-school in *Saint Edmund's-Bury*.

Perused and approved by publick Authority; and now the 40 time Imprinted: with certain Copies to write by, at the end of this Book, added.

Printed by *A. M. and R. R.* for the Company of Stationers, 1690

Of the text-books used by Mr. Cheever,—to what extent the New England Primer had superseded the Royal Primer of Great Britain,—whether James Hodder encountered as sharp a competition as any of the Arithmeticians of this day,—whether Lawrence Eachard, or G. Meriton, gave aid in the study of Geography at that early day, we shall not speak in this place, except of one of which he was author.*

During his residence at New Haven he composed *The Accidence*, "*A short introduction to the Latin Tongue*," which, prior to 1790, had passed through twenty editions, and was for more than a century the hand-book of most of the Latin scholars of New England. We have before us a copy of the 20th edition, with the following title page:

"A SHORT
INTRODUCTION
TO THE
LATIN LANGUAGE:
For the Use of the
Lower Forms in the Latin School.
Being the
ACCIDENCE.

Abridged and compiled in that most easy and accurate Method, wherein the famous Mr. EZEKIEL CHEEVER taught, and which he found the most advantageous, by Seventy Year's Experience.

To which is added,
A CATALOGUE of Irregular Nouns, and Verbs, disposed Alphabetically.
The Twentieth Edition.

SALEM:
Printed and Sold by Samuel Hall, MDCCLXXXV."

This little book embodies Mr. Cheever's method of teaching the rudiments of the Latin language, and was doubtless suggested or abridged from some larger manual used in the schools of London at the time, with alterations suggested by his own scholarly attainments, and his experience as a teacher. It has been much admired by good judges for its clear, logical, and comprehensive exhibition of the first principles and leading inflexions of the language. The Rev. Samuel Bentley, D. D., of Salem, (born 1758, and died 1819), a great antiquarian and collector of school-books, in some "Notes for an Address on Education," after speaking of Mr. Cheever's labors at Ipswich as mainly instrumental in placing that town, "in literature and population, above all the towns of Essex County," remarks:—

"His *Accidence* was the wonder of the age, and though, as his biographer and pupil, Dr. Cotton Mather, observed, it had not excluded the original grammar, it passed through eighteen editions before the Revolution, and had been used as generally as any elementary work ever known. The familiar epistles of this master to his son, minister of Marblehead, are all worthy of the age of Erasmus, and of the days of Ascham.

"Before Mr. Cheever's *Accidence* obtained, Mr. John Brinsley's method had obtained, and this was published in 1611, three years before Cheever was born. It is in question and answer, and was undoubtedly known to Cheever, who has availed himself of the expression, but has most ingeniously reduced it to the form

* Unless some one, with more abundant material in hand, will undertake the task, we shall prepare ere long a Paper on the Early School Books of this country, published prior to 1800, with an approximation, at least, to the number issued since that date.

of his *Accidence*,—134 small 4to pages to 79 small 12mo., with the addition of an excellent Table of Irregular Verbs from the great work of the days of Roger Ascham.**

We have not been able to obtain an earlier edition of this little work than the one above quoted, or to ascertain when, or by whom, it was first printed.† An edition was published so late as 1838, under the title of CHEEVER'S *LATIN ACCIDENCE*, with an announcement on the title-page that it was "used in the schools of this country for more than a hundred and fifty years previous to the close of the last century." This edition is accompanied by letters from several eminent scholars and teachers highly commendatory of its many excellencies, and hopeful of its restoration to its former place in the schools. President Quincy, of Harvard College, says: "It is distinguished for simplicity, comprehensiveness, and exactness; and, as a primer or first elementary book, I do not believe it is exceeded by any other work, in respect to those important qualities." Samuel Walker, an eminent instructor of the Latin language, adds: "The Latin *Accidence*, which was the favorite little book of our youthful days, has probably done more to inspire young minds with the love of the study of the Latin language than any other work of the kind since the first settlement of the country. I have had it in constant use for my pupils, whenever it could be obtained, for more than fifty years, and have found it to be the best book, for beginners in the study of Latin, that has come within my knowledge."

* Mr John Brinsley, author of the *Latin Accidence* referred to, was the author of a little work on *English Grammar*, printed in 1622, with the following title:—

"A
CONSOLATION
For Our GRAMMAR
SCHOOLS;
OR,

A faithful and most comfortable incouragement for laying of a sure foundation of a good Learning in our Schooles, and for prosperous building thereupon.
More Specially for all those of the inferior sort, and all ruder countries and places; namely, for Ireland, Wales, Virginia, with the Sommer Islands, and for their more speedie attaining of our English tongue by the same labour, that all may speake one and the same Language. And withall, for the helping of all such as are desirous speedie to recover that which they had formerly got in the Grammar Schooles: and to proceed aright therein, for the perpetuall benefit of these our Nations, and of the Churches of Christ.
LONDON:

Printed by Richard Field for Thomas Man, dwelling in Paternoster Row, at the Sign of the Tulcot, 1622; small 4to.

Epistle, dedicatory, and table of contents, pp. 1 c84 and Examiner's Censure, pp. 2.

This rare treatise is in the Library of George Brinley, Esq., of Hartford, Conn.

† Since the above paragraph was in type, we have seen four other editions of the *Accidence* the earliest of which is the seventh, printed in Boston, by B. Edes & S. Gill, for I. Edwards & I. and T. Leverett, in Cornhill, MDCCIV. For an opportunity of consulting these editions an original edition of Dr. Cotton Mather's Funeral Sermon on the occasion of Cheever's death, and several other authorities referred to in this sketch, we are indebted to George Brinley, Esq., of Hartford, who has one of the largest and choicest collection of books and pamphlets, printed in New England, or relating to its affairs, civil and ecclesiastical,—state, town, church, and individual, to be found in the country.

Mr. Cheever was also the author of a small treatise of thirty-two pages, of which, the only copy we have seen [in Harvard University Library] was published forty-nine years after his death, and entitled—

"Scripture Prophecies Explained
IN THREE SHORT
ESSAYS.

- I. *On the Restitution of all things,*
- II. *On St. John's first Resurrection,*
- III. *On the personal coming of Jesus Christ,*

As commencing at the beginning of the MILLENNIUM, described in the Apocalypse.

By EZEKIEL CHEEVER,

In former days Master of the Grammar School in Boston.

'We have a more sure word of Prophecy, whereunto ye do well that ye take heed, &c.'

BOSTON,

Printed and sold by Green & Russell, at their Printing Office, in Queen-street. MDCCCLVII."

The author concludes his last Essay as follows:—

"*Lastly.* To conclude, this personal coming of CHRIST at or before the beginning of the thousand years, is no other but the second coming of CHRIST, and great day of judgment, which the Scripture speaks of, and all Christians believe, and wait for, only there are several works to be performed in the several parts of this great day. The first works, in the first part or beginning of this day, is to raise the Saints; destroy his enemies with temporal destruction; to set up his kingdom; to rule and reign on the earth, with his raised and then living Saints, a thousand years; after that, in the latter part of the day, to destroy *Gog and Magog*: To enter upon the last general judgment, raising the wicked, judging them according to their works, and casting them into the lake of fire, which is the second death. All this, from first to last, is but one day of judgment; that great and terrible day of the Lord, and is but one coming, which is his second, as we plead for. After this, the work being finished, CHRIST will deliver up his mediatory kingdom to his FATHER, and, himself, become a subject, that GOD may be all in all. With this interpretation, all the Scriptures alleged, and many more, will better agree and harmonize in a clear and fair way, not crossing any ordinary rules given of interpreting Scripture than in restraining CHRIST's personal coming to the work and time of the last judgment. And, though many of these Scriptures may have a spiritual meaning, and, may be already in part fulfilled, which I deny not, yet that will not hinder, but that they may have a literal sense also."

Of Mr. Cheever's personal history, after he removed to Boston, we have been successful in gathering but few particulars not already published. From a petition addressed by him to Sir Edmund Andross, in 1687, some seventeen years after he removed to Boston, it appears, that he was then in prime working order as a teacher—still enjoying his "wonted abilities of mind, health of body, vivacity of spirit, and delight in his work." The following is the petition copied from the Hutchinson Papers in the Massachusetts Historical Society and printed by Mr. Gould:

"To His Excellency, Sir Edmund Andross, Knight, Governor and Captain General of His Majesty's territories and dominions in New England.

"The humble petition of Ezekiel Cheever of Boston, schoolmaster, sheweth that your poor petitioner hath near fifty years been employed in the work and office of a public Grammar-schoolmaster in several places in this country. With what acceptance and success, I submit to the judgment of those that are able to testify. Now seeing that God is pleased mercifully yet to continue my wonted abilities of mind, health of body, vivacity of spirit, delight in my work, which alone I am any way fit and capable of, and whereby I have my outward subsistence,—I most humbly entreat your Excellency, that according to your former kindness

so often manifested, I may by your Excellency's favor, allowance and encouragement, still be continued in my present place. And whereas there is due to me about fifty-five pounds for my labors past, and the former way of that part of my maintenance is thought good to be altered,—I with all submission beseech your Excellency, that you would be pleased to give order for my due satisfaction, the want of which would fall heavy upon me in my old age, and my children also, who are otherwise poor enough. And your poor petitioner shall ever pray, &c.

Your Excellency's most humble servant,

EZEKIEL CHEEVER."

He died,* according to Dr. Mather, "on Saturday morning, August 21, 1708—in the ninety-fourth year of his age; after he had been a skillful, painful, faithful schoolmaster for seventy years, and had the singular favor of Heaven, that though he had usefully spent his life among children, yet he was not become *twice a child*, but held his abilities, in an unusual degree, to the very last,"—"his intellectual force as little abated as his natural." It was his singular good fortune to have lived as an equal among the very founders of New England, with them of Boston, and Salem, and New Haven,—to have taught their children, and their children's children, unto the third and fourth generation—and to have lingered in the recollections of his pupils and their children, the model and monument, the survivor and representative of the Puritan and Pilgrim stock, down almost to the beginning of the present century.

President Stiles of Yale College, in his Literary Diary, 25th April 1772, mentions seeing the "Rev. and aged Mr. Samuel Maxwell, of Warren," R. I., in whom "I have seen a man who had been acquainted with one of the original and first settlers of New England, now a rarity."† "He told me he well knew the famous Grammar schoolmaster, Mr. E. Cheever of Boston, author of the *Accidence*; that he wore a long white beard, terminating in a point; that when he stroked his beard to the point, it was a sign for the boys to stand clear." In another entry, made on the 17th of July 1774, Dr. Stiles, after noting down several dates in the life of Mr. Cheever, adds, "I have seen those who knew the venerable saint, particularly the Rev. John Barnard, of Marblehead, who was fitted for college by him, and entered 1698." Rev. Dr. Mather, in 1708, speaks of him not only as his master, seven and thirty years ago, but, also, "as master to my betters, no less than seventy years ago; so long ago, that I must even mention my father's tutor for one of them."

* "Venerable," says Governor Hutchinson, in his History of Massachusetts, (Vol. II., page 175, Note), "not merely for his great age, 94, but for having been the schoolmaster of most of the principal gentlemen in Boston, who were then upon the stage. He is not the only master who kept his lamp longer lighted than otherwise it would have been by a supply of oil from his scholars."

† There is now living in Bangor, Maine, "Father Sawyer," who was born in Hebron, Conn., in Nov., 1755, and who has preached the gospel for 70 years. He knew Rev. John Barnard, of Marblehead, a pupil of Mr. Cheever. These three persons connect the present with the first generation of New England.

He was buried, according to an entry of Judge Sewall in his manuscript Diary,* under date of August 23, "from the school-house. The Governor, Councillors, Ministers, Justices, Gentlemen being there. Mr. Williams (his successor in the school) made a handsome oration in his honor."

* We are indebted to Rev. Samuel Sewall of Burlington, Mass., for the following transcript from the manuscript Diary of Judge Sewall:

"Feria septima. August 21st (1708). Mr. Edward Oakes tells me, Mr. Chiever died this last night. N. He was born January 25th 1614. Came over to New England 1637, to Boston, land to New Haven 1638. Married in the Fall, and began to teach School, which work he was constant in till now; first at New Haven; then at Ipswich; then at Charlestown; then at Boston, wither he came in 1673; so that he has labored in that calling skillfully, diligently, constantly, religiously, seventy years—a rare instance of Piety, Health, Strength, and Service-ableness. The welfare of the Province was much upon his spirit. *He abominated Periwigs.*"

The Rev. Mr. Sewall, in communicating the above transcript, adds the following remarks by the way of postscript. "Though Judge Sewall wrote the Sentence underacored last, yet it was not as what he conceived to be the *climax* of the characteristic excellence he had ascribed to good Master Cheever, but as a fact which happened to come into his mind as he was writing, and which he regarded as a recommendation of Mr. Cheever. In his prejudice against Periwigs, he was not singular. Such men as Rev. John Elliot was alike opposed to them; and Rev. Solomon Stoddard of Northampton wrote against them."

The assault of "the learned and reverend Mr. Stoddard," of Northampton, on Periwigs, was in a letter addressed to a distinguished citizen, no other than Chief Justice Sewall, and published at Boston, with other matters, in a pamphlet, in 1722, entitled "*An answer to some cases of Conscience respecting the Country.*" After disposing of some grave questions touching the oppression of the poor and ignorant by the knowing and crafty, in selling at an exorbitant profit, in depreciating the currency of the country, in taking advantage of the necessities of a man in debt, the author passes to the consideration of the lawfulness in the light of scripture, of men wearing their hair long, or of cutting it off entirely, for the purpose of substituting the hair of other persons, and even of horses and goats. "Although I cannot condemn them universally, yet, in wearing them, there is abundance of sin. *First*, when men do wear them, needlessly, in compliance with the fashion. *Secondly*, when they do wear them in such a ruffianly way as it would be utterly unlawful to wear their own hair in. Some of the wigs are of unreasonable length; and, generally, they are extravagant as to their bashiness." He not only condemns the wig because it is "wasteful as to cost, but, because it is contrary to gravity." "It makes the wearers of them look as if they were more disposed to court a maid than to bear upon their hearts the weighty concerns of God's kingdom."

But, Mr. Stoddard and Mr. Cheever were not alone in their abhorrence of wearing periwigs. The Apostle Eliot, talked, prayed, and preached for its suppression. The legislative authorities of Massachusetts denounced "the practice of mens wearing their own or other's hair made into periwigs." It was made a test of godliness and church-membership. In spite of the authority given to the custom by William Penn, who, according to his biographer, "had four wigs with him, which cost him twenty pounds," the Friends, in their monthly session, at Hampton, in 1721, made this decision: "It was concluded by this meeting that the wearing of extravagant, superfluous wigs is altogether contrary to truth." In the second church of Newbury, in 1762, one Richard Bartlett was "dealt with": *First*, our said brother refuses communion with the church for no other reason, but because the pastor wears a wig, and because the church justifies him in it; setting up his own opinion in opposition to the church, contrary to that humility which becomes a Christian. *Second*, and farther, in an unchristian manner, he censures and condemns both pastor and church as anti-Christian on the aforesaid account, and he sticks not, from time to time, to assert, with the greatest assurance, that all who wear wigs unless they repent of that particular sin, before they die, will certainly be damned, which we judge to be a piece of uncharitable and sinful rashness." This custom prevailed in England and France, as well as in this country, and there, as well as here, provoked the attacks of the pulpit and the satirist, but gradually disappeared, or gave place to other fashions of the toilet, if not quite so monstrous, full as expensive and as absurd.

"There is no accounting for taste." See Felt's *Customs of New England*.

SCIENTIFIC SCHOOLS IN EUROPE.

BY DANIEL C. GILMAN, A. M., NEW HAVEN CONN.

EVERY American who studies the educational systems of Europe, remarks with surprise the universal prevalence of schools intended for instruction in theoretical and practical science.

In contrast with his own country, where until quite recently, arrangements have been made for the special training of but three professions, known in consequence as "the learned professions," he finds that abroad, definite courses of instruction, equally thorough and systematic, are provided for engineers, architects, miners, chemists, farmers, foresters, and the like. Educational institutions for these objects are not confined to any one country. France, Prussia, Austria, and the smaller German states, Russia, Sweden, Denmark, Belgium, Spain, Portugal, Greece, and recently England, have all recognized the importance of such schools. For their liberal maintenance, annual appropriations are made by the state with as much regularity as in this land for the support of Common Schools.

The usefulness of such institutions, wherever they have been commenced, is unanimously admitted. The material prosperity of many European countries is manifestly dependent upon the extent and character of their systems of scientific education.

In illustration of this point, let a few instances be cited. Notwithstanding various adverse circumstances, the limited extent of its mines of iron and coal, its long protracted and oft repeated wars, and its frequent changes in government, France holds the foremost place among enlightened nations. It excels in the perfection of manufactured articles, in the triumphs of modern architecture, in the construction of rail roads, in the administration of its mines, in the superiority of its army, in the diffusion of elegance and taste, and in the general enjoyment of the comforts and luxuries of civilized life. All this is owing in a great measure to the number and variety of those institutions in which scientific investigations are encouraged or applied. The capital has its Polytechnic Institution, its *Conservatoire* of Arts and Trades, its Central School of Arts and Manufactures, its Academies of Design, and of the Fine Arts, its Engineering School

for Roads and Bridges, its Garden of Plants, with museums and courses of lectures, its School of Miners, besides the various scientific chairs established in the university. While Paris is thus provided with schools for the highest kind of instruction, the provincial cities and towns have their subordinate institutions, often directed by the graduates of the metropolitan establishments. Thus, throughout the whole empire, industrial education is provided; sometimes of a theoretical character, and sometimes exceedingly practical, as in the schools of weaving, at Lyons and Nismes, of ship building at La Rochelle, and of lace making at Dieppe.

The little kingdom of Saxony affords another good illustration of the effects of industrial training. Apparently shut out by its interior position from all foreign commerce, and suffering from an overcrowded population, the country is prosperous and happy, its trade is active, its manufactures celebrated, its fields well tilled, its mines well worked. The cause of this is found in the fact that the Polytechnic School at Dresden, the Forest School at Tharandt, and the Mining Academy at Freiberg, are all institutions of a superior order, the influence of which is not only directly exerted upon the material welfare of the country, but also indirectly, by supplying a multitude of schools of lower grades, with properly trained instructors. It is surprising to notice the number of these industrial seminaries. According to Dr. Barnard,* Saxony, with a population about equal to that of Connecticut, Massachusetts, and Rhode Island, had a short time since, a university with 85 professors, and 835 students; six academies of the arts and of mining, with 43 instructors, and 1400 pupils; eleven gymnasia; six higher burgher and real schools; three special institutions of commerce and military affairs, with 43 teachers and 240 pupils; nine normal schools; seventeen higher schools of industry or technical schools, with 72 teachers and 779 pupils; sixty-nine lower technical schools with nearly 7000 pupils; and 24 schools of lace making, with 37 teachers and nearly 2000 pupils; in addition to more than two thousand common schools, a large number of private schools, and public establishments for the blind, deaf, and other unfortunate persons.

The experience of Belgium, sometimes called "The work-shop of Europe," confirms the importance of industrial and scientific education. According to Dr. Playfair, one hundred of its leading manufacturers have been trained in the elevated course of the Central School in Paris, while the Belgian institutions themselves have been well attended, and have given to still larger numbers of men

* National Education in Europe. Page 260.

engaged in industrial pursuits, education of a superior order. In the Engineering school of Ghent, the Mining school of Liège, and the various Agricultural institutions, the highest principles of science are taught in their applications to industry, with evident benefit to the whole material prospects of all the country.

The experience of Russia may likewise be cited. Notwithstanding that the empire is deficient in the means of popular education, a system of technical instruction has been inaugurated in the capital, which is exerting a most important influence upon the development of the country. The results of the training which is given in the schools at St. Petersburg, of applied theoretical science, were evinced in the remarkable contributions from Russia, exhibited in the Crystal Palace, at London, in 1851, and drew forth a general acknowledgement that schools of Mines, of Agriculture, of Forestry, and the Polytechnic Institute, have already effected the useful arts in that country, to an extent which is surpassed only by the influence which the admirable schools of military science have had upon the arms of the empire.

Prussia, Austria, and the lesser powers of Germany, likewise unite in testifying that the agricultural and manufacturing prosperity of those countries, other things being equal, has been in direct proportion to the efficiency of their schools of special training.

What now has been the consequence of an opposite course of procedure, to that pursued in the nations that have been mentioned? It is not necessary to refer to Spain, Portugal, and Italy, where scientific education, although commenced, is still far behindhand. England, commercial and industrial England, may be brought up as an illustration of the bad effects of neglecting industrial instruction. Its mines of coal and iron, and other metals, the foundation of manufacturing success, are abundant, its inhabitants are eminently practical, its institutions are free; all this tending to the maintenance of its once preëminent position in the world of industrial art. But what is its real condition? Without quoting the expressions of M. Cocquiel, a Belgian gentleman, commissioned to study the establishments of Great Britain, nor those of other foreign observers, who might be influenced by jealousy or hostility, it is quite enough to say that Englishmen the best qualified to judge, agreed at the close of the London Exhibition of 1851, that Great Britain was losing its relative position; and instead of remaining superior in manufacturing skill to all nations upon the continent, was in danger of becoming inferior to many. The Royal Commissioners of the World's Fair, even went so far as to state in their Report to the Crown, that Eng-

land "would lose its strength and pride" unless some new measures should be taken for instruction in theoretical and practical science. Dr. Lyon Playfair, of London, a gentleman distinguished for his high attainments and wide observation, in a lecture on the results of the English exhibition, took for his especial theme, "Chemical Manufactures, as indicating the necessity of Industrial Education." Among other things he remarks, "The result of the exhibition, was one that England may well be startled at. Wherever, and (that implies in almost every manufacture,) Science, or Art, was involved as an element of progress, we saw as an inevitable law, that the nation which most cultivated them was in the ascendant. Our manufacturers were justly astonished at seeing most of the foreign countries rapidly approaching, and sometimes excelling us in manufactures, our own by hereditary and traditional right." In surgical instruments, and some kind of edge tools; in swords and guns; in plate and flint glass; in woollens; in calico printing and paper staining; in china and porcelain; and even in hardware, the lecturer acknowledged that England if not surpassed, was closely rivaled by nations once obviously in the rear. As a remedy for all this he forcibly urges "Instruction in Science," upon the attention of the people of Great Britain.

A few months afterward, Dr. Playfair visited the Scientific Schools of the continent, and in making known their admirable features to the people of England, he showed conclusively that the "experience" in manufacturing, which his own countrymen self-confidently relied on, was immediately made use of by foreign states, and diffused, moreover, by what was wholly neglected in England, industrial education. Consequently, the continent, he says, has a growing element in production, we a decreasing.

The practical character of the English was never better illustrated than by the manner in which this humiliating lesson of their industrial inferiority was received throughout the kingdom. There was no denial of the truth, no avoidance of the remedy. The Board of Trade was immediately authorized to organize a Department of Science and Art, to which a Parliamentary appropriation of £80,000 was made, for the expenses of last year and by means of which elevated instruction in theoretical and practical science will soon be liberally provided.

Having thus alluded to the general establishment in Europe of Schools of special training and their acknowledged advantages, it is important, before enquiring what lessons our own country should derive from them, to distinguish between the different kinds of educational establishments to which the term "Industrial," is applied.

The terminology as well as the system of education varies in different countries, but in a general way it may be said that industrial schools are of three kinds, intended for the wants of different social ranks. The lowest of these are schools for children so poor or degraded that they are not able or ought not to give up work for study, but who may be taught to read, write, and cipher, while acquiring the rudiments of some simple trade. A second class of these industrial schools, is intended for pupils who have received a good elementary education, and who are willing, either at its close, or during its progress, to spend some time in special training for their future occupations. Such scholars, without entering upon the highest branches of science, become familiar with the applied laws of chemistry, mechanics, and the like; and can immediately command in the mine, the work-shop, or the field, far higher positions than those who have merely received a so-called practical education.

The highest class of special schools have, sometimes, when based upon independent foundations, received the name of "industrial universities," and at other times have been recognized in the highest institutions, as legitimate parts of the philosophical faculty, coördinate with schools of law, medicine, and theology. These alone deserve the name of "scientific schools." In many countries, the degrees or certificates which they grant, are far more essential to success in various practical callings, than good diplomas or fair examinations are in this country, for admittance to the bar, the pulpit, or the faculty of medicine.

The thorough and yet comprehensive character of the instruction that is given in these scientific schools, is worthy of remark, in contrast with what has thus far been provided in our own country. The utmost which has been done in our institutions, has been to establish a professorship of agriculture, or a professorship of engineering; but in the best continental institutions such sciences would be considered as demanding the attention of several well trained men; and in some countries would each be taught in a separate school with several professors; and all the necessary accompaniments of buildings and apparatus. For any one man to be willing to "profess" a knowledge of two such sciences as "mining" and "metallurgy" would in Germany be considered an indication of emptiness of mind or emptiness of purse.

But these remarks will be better understood by a more particular reference to one or two callings in life, and the preparation required for entrance upon them. Let us take for example, the profession of architecture. Whoever wishes to enter upon it in our country, seeks admission to the office of some man of acknowledged reputation,

where in the most desultory manner, he is allowed to pick up such items of information as he can, relating to his future calling. The most which he can command in any college or university of this country, is instruction in those principles of engineering, which are applicable to architecture. After pursuing such a course, as long as it is agreeable to him, he opens an office of his own, and commences in a half prepared manner, to practice his profession. Is it any matter of wonder that ambitious and costly edifices, wholly wanting in good taste, and combining all orders of architecture in no order of arrangement, abound in this country; that legislative and other public bodies, church and school trustees, as well as private persons, are continually misled by the estimated cost of buildings which they wish to construct, and that serious errors are often made in so fundamental a matter as the strength and stress of materials? All this might be remedied by such an architectural school as there is in Berlin, or even by such architectural instruction as is given in the Polytechnic schools of many other cities.

The Royal Prussian Architectural Academy was established by the ministry of commerce, agriculture, and public works, as an expansion of the architectural school which had previously existed. Its number of pupils is not far from 175, for whose instruction there are 19 regular professors. Seven "extraordinary" instructors announced their courses for the winter of 1854-5. The subjects which are taught in their relations to architecture, are the following:—

Physics, Chemistry, Mineralogy, the nature of Materials, Descriptive Geometry, Perspective, Analytical Geometry, Statics, Hydrostatics, Mechanics, Hydraulics, Aerodynamics, Machinery, Laws of constructing all parts of edifices and machines, the Monuments of Antiquity, and the Comparative History of Architecture, Architectural Machine drawing in its full extent, the Construction of Roads, Rail Roads, and Canals, Country, City, and Ornamental Architecture, the Plans, Calculations, and Estimates for all kinds of building, higher Geodesy and the management of Architectural business.

The annual income of this magnificent institution is about 21,000 thalers, which may be considered as representing a capital of not less than 350,000 thalers, or 245,000 dollars. Pupils of advanced education only are received into the school; while to render valuable the degrees which it confers, the Prussian government recognizes as "Builders," those only who have pursued with credit a two years course of instruction with one of practice, and as "Architects," those only who have followed an additional year of theoretical instruction, and two years practice as builders. Seven years is the average time, after

leaving a gymnasium, before a young man is acknowledged as an "Architect." The effect of such regulations and instruction upon the architecture of the country, is too obvious to be mentioned.

As an illustration of what is doing for another profession, wholly neglected in the educational systems of this country, but yet of the greatest importance to our national prosperity, let the school of Miners, in Saxony, be cited. That celebrated establishment, now in its 90th year, is located at Freiberg, in the immediate vicinity of mines of silver, copper, cobalt, lead, &c. Thirteen instructors deliver lectures upon Physics, Chemistry, Mineralogy, Descriptive and Practical Geometry, Crystallography, Mining Machinery, Metallurgy, the Blow Pipe, Geognosy, Assaying, Mining jurisprudence, Drawing, and the French Language. The reputation of the school is so great that it is attended by pupils from far distant countries; and on the catalogue of 1854, for example, will be found the names of scholars from England, Russia, Sweden, Spain, Tuscany, Wallachia, Chili, Mexico, and the United States of America. The Mineralogical and Geological Cabinet, including the collection of Werner, the physical and chemical apparatus, and the laboratories are all of a high order.

Let us take another illustration of the special instruction which is given abroad, in a school for a profession not less important in our own country, than engineering, or mining, the profession of Agriculture. Every one knows what is done, or what is not done for the farmers of our country. In Europe, almost every state has its chief agricultural school, where scientific instruction is given, and its smaller schools where only the practical duties of a farm are taught. The smaller schools can never live until the higher school is established.

Among agricultural institutions of an elevated order, that at Hohenheim, near Stuttgart, was pronounced by Prof. Bache as the most complete. It is divided into two parts, one for practical and the other for scientific instruction; the number of pupils in the former being limited to 27, and that in the latter being less than one hundred. A farm of nearly 1000 acres is appropriated to the school, and is provided with the necessary buildings for the lectures and the museums, as well as for stables, work-shops, beet sugar manufactories, cider presses, &c. Nine professors form the corps of instructors, in addition to the necessary overseers and assistants upon the farm. Two years is generally required in pursuing the agricultural and two the forestry* course. The special points which are taken up are the follow-

* In France and other countries long settled, where timber is scarce, it is a matter of the highest importance for the government to provide for the protection and cultivation of forests. It is not too early for portions of our own country to pay attention to the same subject.

ing: *First, Agriculture*, the general principles of farming and horticulture, including the culture of the vine, the breeding of cattle, growing of wool, raising of horses, rearing of silk-worms, arrangement and direction of farms, estimation of the value of farms, book-keeping; *Second, Forestry*, including the Encyclopædia of Forestry, Botany of Forests, Culture and Superintendence of Forests, Protection of Forests; Uses of trees for timber, fuel, dyes, &c.; Laws and Regulations pertaining to forests; *Third, accessory branches*; veterinary art; agricultural technology, especially the manufacture of beet sugar, brewing, vinegar making, and distilling; the construction of roads, drains, and hydraulic works. Beside these specialties, more general sciences, like Geology, Botany, Natural History, Chemistry, Physics and Meteorology, Algebra, Trigonometry and Geometry, are all included in the course of studies.

Enough has now been said to show the extent to which special training may be carried in single branches of applied science. But, architecture, mining, and agriculture, are not the only departments thus provided for in Europe. Engineering, especially in reference to Roads and Bridges; Chemistry in its relations to the Arts; the Laws of Mechanics; the Principles of Design; Zoötechny or the peculiarities and care of Animals; Commerce, and even the Post Office system are made in different countries the theme of long and systematic study.

Frequently, instruction in several specialties, or *fächer*, is given in the same institution. The Central School of Arts and Manufactures at Paris, the Trade Institute of Berlin, the Polytechnic Schools of Dresden, Karlsruhe, Munich, and Vienna, are all of that character. They really merit the designation of Industrial Universities.

The limits of this article will not allow of an account of more than one such establishment, and the first which has been named may be taken as a fair example both of what is done abroad and of what is needed at home. Many of the peculiarities in its administration are of course adapted to a different state of society from that which exists among us; but, its general system of organization, providing in one establishment for instruction both in general science and in several specialties, viz.: Mechanics, Architecture and Engineering, Mining and Metallurgy, and Chemistry, applied in all its branches, including agriculture, has already met with approbation in this country in the plans of the Yale and Lawrence Scientific Schools.

The Central School of Arts and Manufactures was commenced at Paris, in 1829, as a private institution; but, its usefulness was so great that the Chamber of Deputies proposed its adoption by the Government, "as a sequel to the Polytechnic School, and an adjunct to schools for special arts and trades."

The money was granted by the Minister in 1838, and in 1843 it appears that nineteen of the *Conseils Généraux* in different departments in France voted funds to send up to this college a certain number of young men from their towns; and the Minister had, it seems, provided for forty, whose previous instruction and good conduct, and the positions of their families, has entitled them to the favor of the State.

The STUDENTS of the establishment are of three classes—viz., those who are brought up by the State; those for whom funds have been voted by the *Councils General* of departments; and those received at the expense of their families.

In order to OBTAIN ADMISSION, Government and departmental candidates are examined at Paris, before a jury named by the Minister of Commerce for this purpose each year. The candidates must have been registered and recommended by the department whence they come; and they must prove that they are between the ages of eighteen and twenty-one. They undergo two examinations—one oral, the other written; and they must solve with ease certain problems in elementary mathematics and geometry. They must write and describe their problems and theories well; draw by rule and compass; sketch and color. Without these qualifications it is impossible to be admitted as a Government student, and the juries are instructed to select those who shew most literary attainments, and who "appear to have that deception of intelligence which promises an aptitude for industrial science, rather than mathematical acquirements." A great preference is given to those who have obtained the necessary qualification in a high degree, and whose means are limited, and the administration is not to aid those whose families are in a position to defray the expenses of their education. All students may participate in an "Encouragement Fund" for the first year, but afterwards only those who shew the greatest amount of merit; and an augmentation may be accorded to those who are remarkable for still higher qualities. PRIVATE STUDENTS are admitted at any age above sixteen. They, too, submit to both oral and written examinations. They must execute certain problems, and write clearly and correctly the theories as set forth in the programme. Foreigners as well as French students are admitted, provided they can write and read the language. In Paris, these examinations are made by a board named yearly by the Council of Studies, in the departments by public professors of mathematics, and in foreign countries by the university professors; and all applicants must produce proper testimonials as to their morality.

The AUTHORITY OF THE SCHOOL is vested in a director and a Council of Studies, consisting of nine professors. The director lives in the college, and is charged with its administration and correspondence, but he can not appoint professors; these are selected for their practical as well as theoretical experience. The Council admit or reject candidates after reading the statement of their examinations, and they report on the progress of each student—as to his aptitude and capabilities, and whether he is eligible to be transferred to a superior division, or whether his friends shall be requested to remove him. The students bind themselves by a solemn declaration to take no part in any conspiracy to oppose the execution of the decisions of their superiors, and they promise to enter into no coalition for imposing on the junior or senior branches of the college. No students are lodged within the college, and they are not permitted to wear any description of uniform.

The COURSE OF INSTRUCTION is limited to three years, during which period it is obligatory. It includes lectures, daily examinations, drawing and graphic exercises, chemical manipulations, working in stone and wood, physics and mechanics, the construction of buildings and other works, and general annual examinations. The students are, in addition, expected to make notes and reports, and to visit the workshops and manufactories. They are boarded and lodged at respectable houses in the immediate vicinity, at their own expense. Each year there are general examinations in every branch of science and art. In the middle of the second year the studies are subdivided—one course is general, the other has special relation to the ultimate destination of the scholar.

The specialities are four in number:—1. Mechanicians. 2. Constructors, as architects, engineers. 3. Mining and metallurgy. 4. Chemistry, applied in all

its branches, including agriculture. After that period, the whole energies of the student are devoted to those branches of science on which the profession he is about to adopt depends.

With respect to **DIPLOMAS** and **CERTIFICATES**, the students of the third year are admitted to competition for diplomas, a programme of examination being made out for each speciality. The competitors are allowed thirty-five days within the college to make out their designs and compose their memoir, and then they are examined by five professors in public and before the students of two years. After the examination, the professors in council grant diplomas to those who have excelled and who have passed with the greatest honors, and "certificates of capacity" to those who have given less general proof of the highest talent. At each examination those who do not advance sufficiently, or are idle, are recommended to retire. All the examinations are kept for reference in the archives of the college.

The **FEES** FOR EACH STUDENT, including several extras, are altogether 870 francs (\$174) per annum. That the institution is flourishing, is proved by its being mainly self-supporting; and that the country benefits by it, the long array of eminent graduates who might be named together with a statement of their present employments, would most satisfactorily illustrate.

The following is the programme of instruction somewhat more in detail:

FIRST YEAR.

Descriptive Geometry. Theory and application to perspective, drawing, and shading; stone-cutting—details; carpentry—details.

Analytical Geometry and Mechanics generally. Theory of motion and equilibrium of forces; velocity, acceleration, force, mass; general principles of motion, gravity, power, effect; statics of solid bodies.

Construction of Machines.

Transformation and Modification of Motion.

Physics generally. Laws of gravity, balances, pendulum, and its application; hydrostatics, hydrodynamics, heat, magnetism, electricity, electro-dynamics and electro-magnetism, molecular action, acoustics, light, optics.

For the first year the students are made to manipulate, in determining the density of solids, liquids, and gases, the construction and use of barometers, thermometers, and hygrometers; determination of refractive powers, photometers; power of rotation in liquids, saccharometers.

Chemistry generally. Minerals, and the study of all objects not metallic; the atmosphere, gases. Metallic; general methods for extraction of metallic oxides; general properties of sulphurets, chlorides, &c.; general properties of the salts; metals useful either alone or in their combination for the arts.

Organic chemistry. Methods of analysis; principal organic products; their uses in the arts; acids, and their applications.

One day in the week in the laboratory, to practice the experiments they have seen in the lecture-room.

Medicine and Natural History applied to Industry.

Hygienic Science and Physiology, as far as Public Health is concerned:

First Part. Food, clothing; influence of heat and cold; dampness, and a dry atmosphere; sun and winds; the health in different professions; sanitary regulations and legislation.

Second Part.—Natural History. The animal creation in all that relates to industry, the arts and agriculture; power, produce, and nutriment. The vegetable creation; substances employed in the arts: wood, textiles, cereals, wines, tanning, dyes.

Drawing and Design in its various Branches. During the vacation, plans and elevations of buildings and works are executed, which must be presented at the commencement of the term.

SECOND YEAR.

The same as the first year, besides modeling in plaster for stone-cutting, &c.

Industrial Physics. Properties and construction of furnaces of all kinds for different descriptions of fuel, transmission of heat, sublimation, distillation, evaporation, heating air and liquids, refrigeration, lightning, ventilation, and sanitary arrangements of towns; constructions of all kinds in model bricks and plaster of Paris.

During the recess the students visit works and manufactories, and are obliged to present detailed reports on them.

The students of the third year complete five different projects, with drawings, calculation and estimates on which there are conferences, one on each speciality every month.

Second and Third Year. Applied mechanics in great detail, applied hydrodynamics, construction and setting up of machines, analytical chemistry in different branches for different professions, industrial chemistry both mineral and organic, agricultural chemistry.

Public Works. Roads, bridges in stone, wood, iron, and suspension; natural inland navigation, artificial inland navigation.

Architecture.

Geology and Mineralogy.

Mining, Working, and Ventilation. Metallurgy and fabrication in iron, steel, zinc, and copper; furnaces and foundries for all metals.

Technology. Manufacture of cordage; stone and wood sawing; textile manufactures in

cotton, wool, flax, silk; cotton spinning; expression of oils; grinding, felting, ceramic works, and pottery.

Special Courses for the Third Year. Steam-engines of all descriptions; railways and different systems for locomotion; the students visiting the most important works with their professors.

The students are examined daily upon the subjects of their lectures, by the professors and repeaters (*Répétiteurs*.) The utility of this latter class of teachers is well established in France, and they are found in every institution in which lecturing is practiced to a great extent as a means of instruction; they prevent the burthen of teaching from falling upon professors, whose duty it is to be engaged in advancing, as well as in propagating science, and who would be prevented from following one or other of these honorable and useful careers, by having the duty of teaching superadded to that of lecturing. So well is the necessity of relieving the professor understood, that in all courses requiring preparation, special persons are appointed, called preparers, who take off this burthen also from the professor. The result is, that many men of high eminence are thus enabled to diffuse their knowledge among students by lecturing, and are willing to do so, though they have other and more profitable employments, to which they would exclusively confine themselves, if this were connected with teaching by interrogation and the task of preparing experimental illustrations. The pupil is thus greatly the gainer, and has at the same time the special examination upon the lecturers which is so necessary to complete the instruction, and to which a repeater is entirely competent. Young men of talent seek the situations of repeaters as the best method of showing their particular qualifications, and the most certain road to a professorship. For each recitation the pupil receives a mark, and the roll of the class with these marks being preserved, its indications are combined with the results of the examination, to decide upon the fitness of a pupil when he comes forward for a diploma.

The graphic exercises consist in the drawing of ornamental work, in India ink drawing, in drawing with the steel pen and instruments, and in sketching the diagrams of the lectures to a scale. Great importance is attached to this part of the course, and much time spent in it. The rooms for these exercises are conveniently arranged, and the pupils are superintended during them by a professor or a repeater, and visited occasionally by the director of studies or his deputies. The drawing-tables are so arranged that the pupils stand while at work, which at their age is very desirable.

The arrangements for chemical manipulation by the students are very complete; they have access not only to the laboratories of the two professors, but to others which are devoted to special branches. During the first year every student is employed in laboratory duty once a week, and has also the opportunity of performing some of the principal physical experiments. They are superintended, while thus occupied, by repeaters. During the first half year of the second course the students are called, in turn, to general duty in the laboratory; and during the second half of the same year, and the whole of the third, the two sections who follow the courses of chemistry applied to the arts and metallurgy, are employed in manipulations connected with them. There is an officer for their superintendence, called the director (*chef*) of the chemical exercises, who is subordinate to the professor of chemical analysis. The opportunities thus afforded of acquiring a general practice under the guidance of the distinguished professors of this school are invaluable, and form one of the most important features of the establishment.

The materials for constructing models of some of the more useful works, and apparatus relating to the arts, are furnished to the pupils, and used under the direction of their instructors.

The annual number of students entering varies from 130 to 160. They work eight hours and a half in the college, and four at their residences. Four inspectors are constantly occupied in surveying, independently of those superintending the graphic department.

* The above account of the SCHOOL OF ARTS AND MANUFACTURES, at Paris, is copied from *Barnard's National Education in Europe*, to which the reader is referred for a full description of the Polytechnic School of France at Paris, the Central Institute of Arts at Berlin, and the Polytechnic Institute at Vienna.

Having thus considered the universal prevalence in Europe of scientific schools, their acknowledged value, and their comprehensive scope, let us briefly inquire into the wants of our own country, now almost wholly deficient in the higher and lower schools of special training, with the exception of law, medical, theological, and normal seminaries.

If England, from which we annually import so large an amount of manufactured articles, became alarmed about its industrial prosperity, what may we not fear? We are a new country, it is true, doing in years the work of centuries; but, for this very reason, every day of labor should be spent in the most effective manner. No time should be lost in trying experiments whose value has already been decided upon elsewhere. The science as well as the experience of every other nation should be brought to use in our own. Communication with the old world is so frequent, that it is not only our loss but our fault, if we fail to make the most of European discoveries. But, how do we compare, in most of our manufactures, with France, England, Belgium, and Germany? Let the commercial statistics of our country reply. The slightest examination of such tables will show that for many articles not merely of luxury, but of almost universal consumption we are wholly dependent upon European countries.

The recent Exhibitions of Industry and Art, made in London, New York, and Paris, have confirmed this fact. Upon these occasions, opportunities of a favorable character have been afforded for the comparison of the industrial attainments of different lands; and, although, in London and Paris, our own countrymen did not avail themselves to the full extent of the advantages of such an exhibition, yet, any one who was acquainted with the character of American manufactures, needed only a glance at the displays which were made by European nations, to be convinced that, notwithstanding the number of ingenious inventions which have originated in this country, the productions of our shops and factories are, except a few cheap staple goods, inferior to what are made at a corresponding cost abroad. There are many branches of useful manufacture in which, as yet, we have scarcely made a commencement.

Now, to what is the undeveloped state of our mines, the imperfect character of our agriculture, the inferior quality of our manufactures, and the disappearance of our forests, to be attributed? Surely, not to the lack of general intelligence among the people, to the want of popular instruction, unjust laws, nor to any deficiency in natural resources. Without boasting, we may claim to be a nation of enterprising and industrious freemen, in a land preëminently favored in its

productive capacity. But, have we the educational means which we require? Granting that our common schools, our colleges, and our "professional" institutions are, for the most part, excellent, are there not great wants still unsupplied? Even with the good beginnings which have been made in several places, what have we in our whole land to compare with the Scientific Schools of European countries? Why is it that scores of young men are annually visiting Europe to pursue those special courses of instruction which are there so liberally provided? Why is it that the munificent endowment of Mr. LAWRENCE, at Cambridge, has immediately attracted so many pupils? Why is it that the Schools of Engineering and Applied Chemistry, commenced at New Haven, without any funds for the endowment of professorships, the erection of buildings, the collection of museums, and the purchase of apparatus, have already been so well attended? Because the young men of this country, as the professions of law, medicine, and theology become crowded, are eager for the proper training to excel in other sciences, and also because the producers of every kind, are rapidly learning that for a long and successful competition with the manufacturers of Europe, the same union must be established in this country which exists abroad, between Applied and Theoretical Science.

It is a characteristic of our citizens to do upon a liberal scale whatever is attempted. Our colleges, our popular schools, our public libraries, our observatories have often received munificent endowments. In the present condition of our country, it is not less important that a Scientific School of the highest order should receive a corresponding degree of sympathy and support. Anything less than a liberal provision for its wants, would but half accomplish the task that is to be performed. Large investments, on the other hand, will re-act most efficiently on the welfare of the land.

With the greatest wisdom, the Fathers of New England, in the earliest days of their colonial existence, commenced not merely the school for elementary instruction, but the grammar school, and the college, in which more elevated departments of knowledge might thoroughly be taught. In those branches of science which have been discovered since their day, we need to follow their example. The rudiments of science are already taught in various institutions and experimental knowledge is attained in the shop and the field. But, more than this is needed. We need higher courses of instruction, which, alone, will secure our continued advancement, or even our permanent prosperity.

It has been sagely said that nothing is more prolific in utilities

than abstractions. Of this truth, the whole history of science is an illustration, its generalizations being scarcely conceived in the mind of the philosopher, before the practical world has made therefrom the most serviceable deductions. A school which, rising above those common places which are universally known, should supply an education of the most elevated order, and should stimulate original inquiries and investigations, would confer unspeakable benefits upon every portion of our country, and would not be without its influence upon the progress of humanity.

Nota.—For the further illustration of this subject we merely add in this connection, a list of the *Fach-Schulen*, or schools of Special Professional Training, which are established in Germany. Schools of Law, Medicine, Theology, and Teachers' Seminaries, are not included in the list.

SCHOOLS OF ARCHITECTURE.—Berlin, Breslau, Chemnitz, Crefeld, Dantzic, Dresden, Eisenach, Erfurt, Halberstadt, Hechingen, Holzminnen, Kaltensordheim, Carlsruhe, Königsberg, Leipzig, Magdeburg, Munich, Nienburg, Plauen, Tübingen, Weimar, and Zittau. *Total, 22.*

SCHOOLS OF MINING.—Berlin, Clausthal, Freiberg, Halberstadt, Leoben, Fraibram, Steben. *Total, 7.*

SCHOOLS OF FORESTRY.—Aschaffenburg, Ausser, Berlin, Brunswick, Clausthal, Dreissigacker, Dübén, Eisenach, Freiburg, Giessen, Hohenheim, Carlsruhe, Kiel, Königsberg, Mariabrunn, near Vienna, Melsungen, Neustadt-Eberswalde, Tharandt. *Total, 18.*

SCHOOLS OF COMMERCE.—Berlin, Bremen, Chemnitz, Darmstadt, Dessau, Dresden, Fürth, Hamburg, Insterburg, Carlsruhe, Leipzig, Lübeck, Magdeburg, Mannheim, Nuremberg, Rostock, Rothenburg, Trieste, Vienna. *Total, 19.*

MILITARY SCHOOLS.—Bensberg, Berlin, (three), Brunswick, Culm, Darmstadt, Dresden, (two), Hainburg, Hanover, (two), Carlsruhe, Cassel, Cracow, Ludwigsberg, Marburg, in Austria, Munich, New Cilli, Oldenburg, Olmütz, Potsdam, Stralsund, Wahlstadt, near Liegnitz, Vienna, Neustadt, near Vienna, (four), Wiesbaden. *Total, 30.*

SCHOOLS OF AGRICULTURE.—Amberg, Ansbach, Aschaffenburg, Augsburg, Bamberg, Bayreuth, Beberbeck, Carlsbad, near Rostock, Darmstadt, Dreissigacker, Dresden, Eldena, near Greifswald, Erlangen, Freysing, Hof, Hohenheim, Jena, Kaiserslautern, Cannstatt, Carlsruhe, Kaubauern, Kempten, Landau, Landshut, Mückern, near Leipzig, Möglin, near Wriezen, Munich, Neudeckerhof, Nordlingen, Nuremberg, Passau, Poppelsdorf, near Bonn, Proscow, in Silesia, Regensburg, Regenwalde, Schleisheim, Schweinfurt, Speler, Straubingen, Tharandt, Waldau, near Königsberg, Weißenstephan, Wiesbaden, Wunsiedel, Würzburg, Zweibrücken. *Total, 46.*

SCHOOLS OF MUSIC.—Hamburg, Cologne, Leipzig, Luxemburg, Munich, Prague, Vienna. *Total, 7.*

SCHOOLS OF NAVIGATION.—Bremen, Cattaro, Dantzic, Emden, Fiume, Grabow, near Mettin, Hamburg, Hanover, Königsberg, Lübeck, Lussinpiccolo, Memel, Papenburg, Pillau, Ragusa, Rostock, Spalato, Mettin, Timmel, Trieste, Wustrow, Zara. *Total, 22.*

VETERINARY SCHOOLS.—Berlin, Dresden, Giessen, Göttingen, Hanover, Carlsruhe, Marburg, Munich, Münster, Schwerin, Stuttgart, Vienna. *Total, 12.*

SURGICAL SCHOOLS. (Distinct from medical faculties in the Universities).—Berlin, (two), Brunswick, Breslau, Dresden, Frankfurt, Hamburg, Hanover, Laibach, Linz, Magdeburg, Salzburg, Vienna. *Total, 13.*

POLYTECHNIC SCHOOLS.—Augsburg, Berlin, (two), Bochum, Brunswick, Breslau, Brünn, Chemnitz, Dantzic, Dresden, (three), Echternach, Elberfeld, Erfurt, (two), Graz, Hanover, Jena, Carlsruhe, Cassel, Königsberg, Magdeburg, Munich, Nuremberg, Prague, Rostock, Stuttgart, Vienna, Wiesbaden. *Total, 30.*

SUMMARY.

Architecture,	22	Music,	7
Mining,	7	Navigation,	22
Forestry,	18	Veterinary,	12
Commerce,	19	Surgery,	13
Military,	30	Polytechnic,	30
Agriculture,	46		
		Total,	226

IX. PLAN OF AN AGRICULTURAL SCHOOL.

BY JOHN A. PORTER, M. D.

Professor of Agricultural Chemistry, in the Yale Scientific School.

AN Agricultural School worthy of the name, is one of the most evident and pressing needs of the country. We are to a great extent, a nation of agriculturists, yet without an institution in the whole length and breadth of the land, which furnishes the proper instruction to the agricultural community.

Professorships of Agricultural Chemistry, indeed, exist in two or three institutions, but away from farms, without means of practical illustration and experiment, and unsupported by other branches of instruction, which would give completeness to an agricultural course, they languish, as they must continue to do, while they stand alone.

These Professorships form no exception to the statement that the country is unsupplied with adequate Agricultural instruction.

The wants of the country in this respect, are obvious.

First. A well stocked and well furnished farm, fully up to the standard of the best agriculture in the world, to show what the best existing practice is.

Secondly. An experimental farm, to improve on the best practice and advance the cause of agriculture.

Thirdly. The means of instruction in all the Sciences connected with the culture of the soil.

The Farm should comprise in its buildings and yards all of the improved arrangements, for the feeding and wintering of stock; all of the manure-saving and manure-making, and labor-saving contrivances, all of the improved machinery and implements which have been submitted to the test of experience, and been proved to be of economical value. Every thing should be planned and constructed from the outset with a sole view to economy and profit, and in the subsequent history of the farm, it should be regarded as successful, just in proportion to its pecuniary returns. The farm should be stocked with cattle and horses, and all other domestic animals of different breeds, including as great a variety as possible, in order to show the characteristics of the different races, and give to pupils the opportunity of

studying their peculiarities. It should be under the superintendence of a thoroughly practical man, and be conducted at his own risk, and for his own profit. Model farming in any practical and economical sense of the term, is not likely to be realized on any other plan. It is by no means so important that the farm should be the *best* farm in the country, as that it should be the best *managed* farm. If it should furnish obstacles to be overcome in the character of its soil, necessity of draining, soil mixing, or other improvements, so much the better, rather than the worse. The farming of a rich virgin soil calls for no aid of science, and demands no skill. The obstacles are just what are wanted to illustrate what skilful scientific farming is, where the farmer, as well as nature, has something to do.

The person in charge of the farm, should have access to all agricultural publications of value, both American and Foreign, and keep himself informed in relation to all new implements and fertilizers, and other suggested improvements; but would be under no obligation to put any of them in practice, unless satisfied of their economical value. Improvements requiring large outlay, such as draining and irrigation, if evidently of great utility and of permanent value, would be executed at the expense of the institution. The management of the farm should be decidedly conservative, and furnish an example of progressive, but prudent farming, conducted with a sole view to profit; including under this term that lasting advantage which consists in the improvement of the soil. All this would be secured by making the income of the farmer dependent on the produce of the farm itself, precisely as if the land he cultivated were his own.

The second great want of the country, in an agricultural point of view, is an *experimental farm* connected with the practical farm as above described, and devoted to experiments in Scientific Agriculture. The subjects for experiment of practical importance to every farmer, are innumerable. Rotations of crops, admixture of soils, the preparation and use of manures, the diseases of plants, the introduction of new plants, are a few among the number. The experimental farm should be under the control of Chemical, and other Professors, for experiments in their several departments; and be regarded as purely experimental ground, where the idea of immediate profit, should not interfere in the least degree with perfect freedom of investigation. The other or main farm being conducted with a view to profit alone, the accounts of the two should be kept entirely distinct, and all material passing from one to the other, should be paid for with a fair equivalent.

The directors of the experimental farm would have occasion to

superintend experiments in feeding, and in the dairy, which would be best made on the associated practical farm, and would increase to some extent the labor there required; but this also, should be paid for, and the character of the latter as a solely practical farm, be in all respects maintained.

The experimental farm would not probably be remunerative in a pecuniary sense, but it would be the means of testing for the associated farm and the country, the value of suggested improvements, of teaching the science of experiment to the pupils of the institution, and from time to time of bringing to light new and important truths in Scientific Agriculture.

A Museum of Agricultural Products is another essential feature of an Agricultural Institution, such as the country needs. It should exhibit grains, roots, fruits, woods in all their variety. Its collections would serve for the purpose of illustration in Lectures on Agricultural Botany, and Physiology. A botanical garden connected with it would add greatly to its value.

A Museum of Agricultural Implements should also form part of its means of instruction. These would serve as illustrations of lectures on the mechanics of agriculture, in which these operations would be explained, and their comparative merits considered.

Such collections can be made at comparatively trifling expense. A suitable building being provided, the material to fill it would flow in from the liberality of farmers and manufacturers, quite as fast as could be desired.

A Veterinary Hospital, for the treatment of diseased animals of the vicinity of the farm, would also be an essential feature of the plan. It should be under the charge of a competent veterinary surgeon, who would give instruction in the nature and cure of the various diseases to which animals are subject.

The principal branches of Science which should be taught in an Agricultural School, are Chemistry, Meteorology, Geology, Mineralogy, Zoology, Entomology, Animal and Vegetable Physiology, Veterinary Medicine and Surgery. To these may be added Surveying, a knowledge of which is of the utmost convenience to the farmer, and should form part of a liberal agricultural education.

Chemistry stands prominent in the list, in view of its superior and acknowledged importance. Agriculture aims at the transformation of earth and air into grain, and wood, and fruit. The process is, in a great part, chemical. Every dung-hill and compost heap, and square foot of soil is a laboratory. Every farmer, whether he would be or no, is a chemist from the very nature of his profession.

But, it is open to his choice to be an ignorant one, or to possess himself of the knowledge of the properties and mutual relations of the materials with which he deals. This knowledge he needs, and must obtain from the scientific chemist. It is none the less necessary if he never makes an analysis. It makes him a rational and economical experimenter, and thus puts him on the road to advance in his profession.

The importance of Mineralogy and Geology, which treat of the materials out of which soils are formed, and from which they derive their character, whose principles guide the Agriculturist in his search for fertilizing materials, and frequently furnish him with the most valuable hints in locating and improving his lands, is equally obvious.

The importance of Meteorology, or the knowledge of the relations of heat and moisture to the atmosphere, and the soil, and the plant, and of the laws on which change of weather depend, is no less apparent.

Although, not necessarily of every day application, all these branches form, properly, part of a liberal agricultural education. And so of all the other sciences which have been mentioned. The enterprising man, possessed of such knowledge, will find abundant occasion for its application, and abundant suggestions in its possession.

On the value of a knowledge of the principles involved in the breeding of stock, and the laws on which its improvement depends; of the diseases of plants, and animals, and of insects, injurious to vegetation, and the means to be employed against them, it is needless to dwell. Instruction in all these branches should obviously form part of an agricultural course.

What a centre of light would such a school as is here described be to the whole agricultural community! All purported discoveries in agriculture would come to it to be tested, and important truths developed by experiment would go forth from it to the world. Through its public museums, its well-arranged buildings, its variety of stock, and latest improvements in every department, open to the public, it would become the direct instructor of the whole farming community. Through its pupils, it would disseminate widely the varied practical information which its course would furnish. And, beyond all this, it might be made the means of eliciting the experimental labor of hundreds of intelligent farmers throughout the country, for the decision of the important agricultural questions which are still unsettled.

The latter point is worthy of some further illustration.

Agricultural experiments, as at present conducted, are so extremely

unproductive, not so much for want of care in their execution, as on account of their isolation. An experiment which belongs to one set of conditions of soil, exposure, and climate, is taken as final for all circumstances; or, if repeated, under different circumstances, with different results, the consequence is rather a diminished faith in all experiment, than a conviction of the necessity of multiplied and varied trials.

The only remedy is a carefully organized system of experiment. Suppose such a system once in operation, and, instead of individual experiments, comparatively valueless from their isolation, the same experiment made in a hundred different places, during the same year, under all the varieties of soil, climate, and exposure which a hundred different localities combine; suppose the results of such a system of experiment carefully collated and compared by its proper head, and the latent principles which they contain deduced—it would not be long ere the innumerable mooted questions, which float through our agricultural journals, and hold their place there year after year, would give place to definite views, resting on the sure basis of accumulated experiment, and take their place as solid stones in the edifice of agricultural knowledge.

But, such a system must have its well devised plan of experiments, and its own experimental ground; asking coöperation, for fear of being burdensome to its coadjutors, only where coöperation is necessary. All these, such an institution as is here described, with its corps of instructors, would furnish, and thus, beside doing its own independent work, be the means of eliciting, to a great extent, the zeal and labor of intelligent agriculturists throughout the country in the cause of agricultural improvement.

With the help of such a system of experiment, it is scarcely hazardous anything to say that an amount of progress in agriculture is possible in ten years, which it would otherwise take a century to accomplish.

Lastly, such an institution should be the source of published information to farmers in relation to its experiments, and all improvements to which they may have lead. It should also keep them informed of the comparative value of all fertilizing materials offered in the market, for the use of agriculturists. It should even control, as it would be able to do by its published analysis, the manufacture and relative price of these articles, and thus secure the farmer against the fraud, to which he is constantly exposed in the sale of spurious and worthless articles.

In founding an Agricultural School, such as is here described, great advantage will be realized by connecting it with a University already

established. Where Professorships of Chemistry, Geology, Mineralogy, Meteorology and Engineering already exist, with well furnished laboratories, and extensive mineral collections, the foundation is already laid, and half of the expense has already been incurred. Such a basis may be regarded as \$100,000 at the least, already contributed to the cause of a great Agricultural School.

An equal sum in addition, would be needed for the other departments although a beginning might be made with less. But even supposing the amount doubled or even quadrupled, it could not be regarded as large, when considered with reference to the magnitude of the interests involved, or the results which might reasonably be anticipated. An annual increase of the value of land in the State of Connecticut alone, by the one-hundredth part of one per cent, as a consequence of the knowledge which such a school would diffuse, would more than pay the interest on such an endowment.

An addition of one peck per acre to the potato crop of the same state would pay it.

An increase of one-thousandeth in the product of hay, or one three hundredth in the dairy produce of the state, would cover it.

It cannot for a moment be doubted, that practical results of immensely greater value than these could be reasonably expected to flow from such an institution.

Looking at the subject from a national point of view, the immense importance of the diffusion of knowledge on agricultural subjects, is still more strikingly impressed.

The number of horses in the United States, is estimated in the last Census report, at about four and a half millions. An addition of one dollar per head to their value, as a consequence of a better knowledge of the principles involved in the breeding and rearing of these animals, would amount to four and a half millions of dollars.

The number of neat cattle is estimated at about eighteen millions. At the moderate valuation of twenty-five cents per head, an improvement of one per cent. would be equivalent here also to an increased value of four and a half millions of dollars.

On taking a more general view, an addition of one per cent. to the annual agricultural produce of the whole country, would amount to sixteen millions of dollars per annum. Yet the possibility of such increase in the value of stock and the products of the soil, is not a matter of question, nor is there any room for doubt that, all that is in the way of it, is the lack of the knowledge, which such institutions as we describe are calculated to diffuse.

Of the practicability of such schools, supposing the funds

at hand, there can be no reason for doubt. The land required is to be had in almost any locality for a fair equivalent. Information in relation to foreign improvements in agriculture, is readily accessible, either in publications or on the spot. Instruction of the highest order in practical agriculture can be supplied from the ranks of our own best farmers. The means of instruction in the sciences connected with agriculture are no less readily attainable.

Neither is there any question as to the demand of the country for liberal agricultural instruction, and the patronage which such schools would receive.

In addition to all the material advantages which would flow from their establishment, they would have an influence which can scarcely be estimated, in elevating and dignifying the calling of the agriculturist. This they would do by their direct influence on those now engaged in Agriculture, and again, by calling forth to its calm and ennobling pursuits, talent and wealth which are now compelled, to seek the dignified associations of learning in other professions.

By extending the course of instruction, for those who should desire it, into correspondence with the professional training required for the pulpit and the bar, the wants of the class referred to would be supplied, and a valuable acquisition of means and influence, which are now expended in other directions, be secured for the cause of Agriculture.

Schools, such as are here described, would give, in fine, to the Scientific Agriculture they would create, the merited rank of a learned profession, and thus dignify as well as advance that branch of industry which lies at the foundation of our national prosperity.

NOTE.—The writer deems it proper to state that he has learned that a plan of coöperative agricultural experiment, with a central farm and bureau, similar to that here proposed, has been suggested by Geo. J. Pumpelly, Esq., of Owego, N. Y., and that the importance of a model farm, of exclusively practical character, has also been strongly urged by S. W. Johnson, Esq., of New Haven.

Those who are interested in the subject of the preceding article, will find, in Barnard's *National Education in Europe*, an account of the system of Agricultural Education established in France, as it was in 1854, with a particular description of the organization of the National Agronomic Institute at Versailles, the Veterinary School at Alfort, the Agricultural School at Grignon, near Paris, and the Subjects of Study and Course of Lectures in the Agricultural School at Grand Jouan, in Brittany.

The Institute of Agriculture and Forestry at Hohenheim, near Stuttgart, in Wurtemberg, which Prof. Bache pronounces "the most complete agricultural school in Europe."

The system of Agricultural Education in Ireland, under the administration of the Commissioners of National Education, with a description of the Model Farm and Agricultural School at Glasnevin, and the Model Agricultural School at Dunmanway.

MORAL EDUCATION.

THE BEST METHODS OF TEACHING MORALS IN COMMON SCHOOLS.

BY REV. CHARLES BROOKS, OF MEDFORD, MASS.

THIS world is our school-house, God is our Teacher and the Bible our class-book ; and yet there are in the United States, two millions of children, between the ages of 5 and 15 who receive no moral culture ; so many heathen in the midst of Christianity ; barbarians in the midst of civilization ! Do you ask, what are we going to do with this increasing army of future voters, who begin to think they hold the balance of power and are therefore preparing to take command of the country. That is not the question. The question is, what are they going to do with us ? I can find but one way of disarming the native savageness, and of preventing the probable future venality of this mass of our own and foreign population ; and that is, *by having a law that shall compel every child to go to school, and then by having moral nurture secured to every pupil.*

That morals should be taught in every school I take for granted. That they *can* be taught in every school I also take for granted ; because they are taught in hundreds of schools in this country. In the Kingdom of Prussia, religion stands first in every catalogue of school-studies and it is taught in every school. In Holland it is required to be taught, according to law, in every parish as a separate parish, but the clergymen must transmit his marks of merit, for each pupil, to the public school teacher, and those marks go to make up the relative rank of the pupil in that public school. In our country it is forbidden by law to teach sectarian dogmatics in public schools ; but, not forbidden to teach morals. The question before us now is, *how can morals be most effectually taught in our common or public Schools ?*

Can there be a more difficult problem presented for solution ? It confessedly stands at the head of perplexing questions in this department on account of the jealousy of different religious sects. I undertake it with extremest diffidence ; but, without angling for sympathy or wasting time in apologies, let us to our work.

What is it to *teach* morals in a school ? It is to impart moral ideas

to children's minds by words; and then, by exercise and example, to make those moral ideas become active principles, embodied in the life. The intellectual idea is first, as a cause; the good life is second as an effect.

Under the head of morals I include all the principles which should regulate the conduct of men: viz., justice, veracity, temperance, industry, chastity, economy, beneficence, love of truth, love of order, conscientiousness, obedience to law, obedience to parents, veneration of age, duties to brothers and sisters, duties to the young, to the state, to the cause of light, liberty, and love. To do violence to any of these principles is to do an immoral act; it is to go contrary to the will of God and the commands of Christ.

Having defined what is meant by morals, and what it is to teach them, the *modus operandi* is the next question.

I apprehend there are four ways or methods by which these moral principles may be taught in the schools of the United States. Three of these modes are direct; one indirect. The indirect mode I will mention first; and it is through the

Family. If parents communicate moral ideas to their children's minds by fireside instruction, and communicate spiritual glow to their hearts by eloquent goodness of life, then their children go to school prepared and willing to receive moral culture there, and prepared also to set before the school, winning lessons of moral beauty. Such children become so many silent teachers of morals in the school. If children receive no spiritual development at home, then they go to school with calloused hearts. In one sense, therefore, parents are to decide whether moral culture can or cannot be prosecuted in the school.

Again. If parents in their families, will speak respectfully and affectionately of the teachers of their children, then those teachers can get hold of the minds and hearts of their pupils; but, if parents speak distrustingly or contemptuously of the teachers of their children, then those teachers can do their children very little good. Parents, therefore, have it in their power morally to strengthen and build up the school or to weaken and destroy it. The family is God's primary school, introductory to the public school. In the family every thing and every body teaches. There are infinitely complex and indescribable feelings, which there give the greatest force to ideas and an unconscious influence to conduct. These manifest themselves in the glance of a mother's eye, the tones of a father's voice, and the manner of a faithful friend. It is this mysterious something, which is all around us like an atmosphere, that truly and permanently shapes

youthful character. The children think the family thoughts, catch the family manners, and follow the family aims; thus carrying the family morals into the school-house, as the grinder of aromatic seeds carries with him wherever he goes, the fragrance of his workshop.

My first mode, therefore, of securing moral teaching in the school, is to secure it in the family.

The second method of teaching morals in schools, is *by the voice and example of the teacher*. This method is direct. The whole practical philosophy of the school system may be summed up in these eight words, "as is the Teacher, so is the school." The nineteenth century demands a higher type of teachers; teachers who are more than a match for the intense mental activity of the age, and who can more than master its tyrannous selfishness. The 19th century imperiously demands, also, that the high and sacred office of teacher should be made a *fixed profession*, and that school instructors should be as fully prepared for their duties as is the clergyman for his. Teachers, teachers, yes, I say teachers have an inconceivable and paramount agency in shaping the destinies of the world. If the question be put to me,—which is the most important to the highest and most durable interests of society, viz., to have a competent pulpit orator for 1,000 grown-up persons, or to have a competent school teacher for the children of those 1,000 persons, I answer, that in my judgement it is the most important to have the competent teacher; inasmuch as the foundation and walls of a building are more important, on the whole, than its finish or its furniture. We have reached a period of the world when society needs whole men; men whose physical, intellectual and moral powers have been developed in their natural order, proper time, and due proportion; men, in whom each of these powers occupies the exact place in the grown-up *character*, which God ordained in the infant *constitution*. How can we have *such* men except by the early unfolding of their various powers? I say *early*. This work must be commenced as soon as reason dawns and conscience speaks. What so necessary as competent teachers of the young mind, and competent guides of the young heart? It is competent teachers, therefore, that I would use for inculcating moral truth and Christian virtue in our common schools. A stupid, unfaithful and vicious teacher, in a company of innocent children, is what the serpent was in Paradise.

It comes then to this,—that, if we have accomplished, purposely prepared, faithful and Christian teachers in our schools we *can* have and certainly *shall* have morality taught in them, both by precept and example. If we have not such teachers, we have no right to expect

such instruction. As is the teacher, so is the school. Nothing can be truer. Competent teachers, whose learning is sanctified by piety, and whose characters are all radiant with love, will assuredly impart their nobility of soul to their pupils. Their spiritual magnetism will go out from them whenever innocent childhood presents itself as a conductor. Such teachers will unconsciously throw into the daily lessons some moral suggestion, moral hint, moral maxim, or moral query; thus giving moral polarity to every thing. Morals will thus act the part in the daily instruction, which oxygen acts in the atmosphere; *insensibly* mixed with other ingredients, yet the life of them all. Such teachers will be consistent. They will strive to be what they teach; and thus throw over all their instruction the beautiful illustrations of their own example.

Now it is very plain, that such teachers, who project themselves into the motives and affections of their pupils, will gradually, but insensibly, become a rule, a conscience, aye, a Bible to them. The sight of such an instructor will be to them as the beauty of holiness; because they know his heart is moved by generous impulses, and his life governed by lofty principles. In one sense he represents God to them. Such a teacher knows that our earthly life and our immortal hopes are intended to *form character*, and that character does not come of mathematics and logic, so much as from the daily exercise of the intellectual and moral faculties united, and from the daily practice of good deeds. When he reads the Sacred Scriptures each morning (and no school should ever be opened without reading them), he will select those parts which will most readily attract juvenile curiosity and most seriously impress youthful hearts. When he leads in their devotions (and this service should always follow the reading of God's holy word), he will take great pains to pray like a child, and not like a man; and in all religious services he will be specially moved by brevity and humiliation, by earnestness and simplicity to touch the deepest fountain of feeling in his pupils. By this reading of the Scriptures and offering of prayer he will teach them that they should begin every thing with God; that they should never plan what they dare not ask him to aid, and never do what they may not ask him to approve. Over the school-room door of one of the Normal schools in Germany are these three words "Pray and Work." This command our Christian teacher would obey and persuade his pupils to obey. Thus he would make morality permeate all true culture, and seize every little incident whereby he could expand the idea of right or deepen the love of truth. I say, that the teacher who is thus filled with Christ's holy spirit and God's holy love, can no

more abstain from teaching morality in his school than he can abstain from breathing. My second practical method, therefore, of teaching morals in schools is to have competent teachers, who are fully able and ever ready to do in this department, what God and nature require to be done.

The third practicable method of teaching morals in our public schools is by *books*. The Bible should occupy the first place in schools. Whether it should or should not be introduced, is a question I would not consent to entertain; for, if God's own word is not to be read by his children, I know of no book that should be.

There are good moral class-books which might be used with great effect by the teachers. There is a small book called "Morals for Schools," written by a lady of Maine, which has done much service; but the best work of the kind, I think, is Dr. Wayland's "Moral Science." This great and good man has secured the lasting gratitude of the philanthropist and the Christian; and now, after a long, useful, and brilliant career, retires from his high position amidst the benedictions of the country. Let me now speak of our school-books, and I say, that books, like teachers, must have morality in them, else they can not impart it. Books, therefore, must be made with special reference to this paramount object. The reading books should contain interesting stories, dialogues, poems, parables, portions of natural history, descriptions of storms, seasons, atmospheric phenomena, biography of good men and women who have resisted temptation, and attained eminence by their moral force of character, biography of bad persons who have come to poverty, disgrace and ruin by yielding to temptation. The most valuable information, and the most attractive moral principles may be so united in a reading book, as to be imperceptibly introduced together to the young mind. The grammar book should teach its science thoroughly, but its principles should be illustrated by short and pithy maxims which contain the moral element. If the author of a grammar wishes to do it, he can make its pages luminous with Divine truth, without exciting the least surprise in any pupil. So the author of a geography, without any violence to his pupil's feelings, show the earth to be full of the riches of God; and thus make the footstool of the Almighty an altar of devotion. History, how it shows, at almost every step, the development of a vast, almighty, moral government! Half the facts of history are luminous with the steps of a divine providence. Why should not a history beam a similar radiance? Take astronomy. How irresistably that science leads to our trust and adoration of God; and while it assures us that "an undevout astronomer is mad," should not the books that

teach this sublime science, be full of light from the Sun of righteousness! Then there is arithmetic; and even from this least promising of departments, a child may be taught to number his days so as to apply his heart to religious wisdom. If the makers of school-books resolved to give to every book a true moral and spiritual polarity, they could do it without betraying the religious sect to which they belonged.

I hardly, therefore, need say, that we need books with a vastly higher type of character than those in common use. We need books which do *not* put asunder what God has joined together. We need books charged with moral electricity, which will flow by an insensible stream into the student's open soul.

Examine all the school-books used in the public schools of the United States; and you will say that 19 out of 20 go upon the supposition that the intellect only is to be cultivated. You would hardly guess from them, that a child had a heart to be sanctified, as he has a head to be enlightened. I say, then, that we need school-books upon a new plan; books which embrace the whole complex nature of childhood; books which look at the world, at man, at truth and duty, from God's angle; books which so communicate the divine ideas in science, and in life, that they can make us think God's thoughts after him. I see no reason why we should not have such books; and when we *do* have them, what a mighty power will they become for infusing the eternal principles of Christ's morality into the soul of inquisitive and impressible childhood. And this is my third way of teaching morals in schools.

My fourth and last method, is this: to introduce *voluntary discussions* on moral topics. The head master should preside over, and direct them. Such discussions would incidentally teach children grammar, the art of expression before numbers, the laws of fair debate, the principles of just criticism, the laws of order, &c.; but, my plan is to use them for teaching moral truth with exceeding distinctness and power. A book of debateable questions, embracing history, biography, government, domestic life, play, work, virtue, vice, &c., should be prepared with special reference to such a school exercise. If such a book does not exist, let the teacher give out such a question from his own mind as he knows to be fitted to his pupils; such questions as the following:

1. Can a person be justified in telling a falsehood under any imaginable circumstances?
2. Is every citizen morally bound to vote in the election of town, state, and national officers?

3. Is every person, who owns property, morally bound to have a written will and testament?

4. How far is a good brother or sister morally bound to help a bad brother or sister?

All human life and human history would furnish the teacher with topics or suggestions. Almost every newspaper might contain records of demoniacal crime or godlike virtue, which could be made fertile in moral impressions. Let the teacher give out his question, and kindly ask each pupil to express his opinion upon it. This exercise, after a few trials, as I know from experience, gets to be very interesting to the pupils. Look at this matter closely. By this process a moral principle is brought palpably before each child's mind. A vote upon the question is to be taken at the end of the discussion; and each vote is secret, written on a scrap of paper, with the voter's name attached. Is it not plain, that each young mind in that school will listen to the question, dwell upon it, turn it over, and turn it round, and try to see where the truth lies? As different speakers give their opinions, the whole assembly waves with emotion, and thoughts are suggested to many minds which no common teaching could educe. Now, what is the effect of this exercise? Is it not to bring soberly before each mind an important moral principle, and then to apply that principle to actual life? Each child knows that he must write down his opinion in his vote; and how certainly will this lead each one to give the best judgment he can form. Is not this direct and powerful moral teaching in school? This mode makes use of the whole school, to teach that school, Christian morality. By this exercise the ideas of right and wrong are entertained by each pupil, and then brought to decide upon moral differences. This exercise, therefore, converts each mind from the *passive* to the *active* state; the only state in which a child learns. The young thoughts kindle as they dwell on the suspended question. The whole soul begins to move, the curiosity is wide awake, the feelers are all out, the reason compares, the judgment weighs, conscience decides, and open side is taken for the right. And I ask if this is not moral teaching? How easy, how natural, how persuasive is such an agency; and how perfectly free from all sectarian prejudice! Without suspecting the philosophy of the process, the child insensibly becomes imbued with spiritual ideas, moral truths, practical rules, and Christian motives. Without knowing it, he is lifted up, in company with his classmates, into the higher regions of a divine life, and that life becomes the *fashionable* fact of the school. Thus this exercise gradually brings out the divine

image in the young and moulds them into a resemblance to the "holy child Jesus."

I am now prepared to state a most important fact. By this easy and delightful process of self-culture, the children have set up in the midst of their school a *common standard of right*; a *common conscience*; a *school conscience*. By means of two such exercises in each week, they have created, in their midst, an intellectual moral umpire to whose eternal principles they bow. To this they refer when they make nice and moral distinctions, and when they measure moral wrong with precision. Thus the government of the school is carried on by the scholars. Is not this securing spiritual development?

How natural and practicable is this method! But, I have one more which you may think better yet. It is this. To convert the whole school into an amicable jury for the purpose of trying imaginable cases of disobedience in the young.

Whenever a pupil commits an offense let the master conceal his name and call him *Justus*, and then the whole school be called to see that justice is done to the unknown offender. Let *Justus* have a chance of explaining and vindicating himself by counsel. Let him be dealt with according to the equitable rules of our common courts; so, that if he is condemned he may know why. The master must be the final judge; and the offender is never to be punished in the presence of any one, except the master who administers the chastisement. The method of conducting such a moral lesson may vary according to circumstances; sometimes only a friendly consultation; sometimes a silent vote after the master has explained all the facts. Another mode might be this in extreme cases. Let the teacher select three boys or girls who are to act the part of accusers of *Justus*, and let the school select three who are to plead for him. Let the rest of the school be jurors, who are to give their vote or verdict on paper, each one writing his name under his verdict. Let witnesses be summoned and give in their testimonies, and let every thing be done which will bring a just verdict. If difficult points come up, so much the better; let the teacher expound them.

In a trial of this kind, there will be an intense interest awakened in every pupil's mind. Each one knows that he has to write his verdict; and he therefore is exceedingly desirous of understanding the case. He will listen to the evidence, follow the pleadings on each side, weigh the objections, balance the probabilities and feel his moral responsibility. He will desire to do what is right, and especially desire not to do wrong. In such a trial, how unconsciously would come up the principles of equity, the rules of morality, the commands

of parents, and the will of God. Opportunities would occur, during a year, of teaching every ethical principle, and scrutinizing every department of human conduct. And be it noted also, that this teaching is in a form never to be forgotten. Here is a great result; these trials would show what? They would reveal the requirements of morality and furthermore *reveal the direct application of its eternal principles to the every day conduct of life.* During the whole trial, moral truth and christian law would occupy the minds and move the hearts of the entire school. The rules of right and the maxims of virtue would not present themselves to the young minds there, as a theory or a guess, but as solemn, tangible, binding, immortal and practicable principles. Each child would get to understand that the principles of morality are omnipresent and almighty; that they are the rules of the divine government, and that they do not for a moment relax their benignant, all pervading requirements over the mind, any more than gravitation relaxes its power over the body. By such a trial each child comes to believe and feel that morality binds every thought, will, and act, thus connecting him with God and immortality, and thus bringing before him his future accountability. Now where a school exercise thus brings together moral principles and daily conduct, I ask if this is not the exact definition of teaching morals in common schools?

[The important subject of Moral Education and Religious Instruction,—involving the use of the Bible and Prayer in Public Schools,—has been presented at different times to the American Institute of Instruction, in well-considered lectures, several of which are printed in the Annual Volumes of its Proceedings. Among these may be mentioned, one by Rev. Jacob Abbott, in 1831; Rev. R. C. Waterston, in 1835; Rev. Joshua Bates, D. D., in 1837; George B. Emerson, in 1842; Rev. Herman Humphrey, D. D., in 1843; Rev. Calvin E. Stowe, D. D., in 1844.

The Hon. E. R. Potter, in his Report to the General Assembly of Rhode Island, as Commissioner of Public Schools, for 1854, has collected, with much diligence and judgment, the opinions of the best writers belonging to different religious denominations, on the subject of the Bible and Religion in Public Schools, for elucidation of an official decision which he was called upon to give as to the extent to which moral and religious education could be made compulsory in the public schools of that state. In this valuable document will be found a condensed view of the practice which prevails in different countries on the subject.—EDITOR.]

XI. THE CRIMES OF CHILDREN.

To **ANY** one whose finer feelings have not been blunted by contact with the world, there is hardly any sight on earth more sad, than a company of children in a christian land, seized by constables, condemned by courts, separated from their natural homes and friends, and shut up by walls, bars, and cells, in what, despite its more euphonious titles—is the prison-house of youth.

Sad as this is, it is a still more gloomy thought, that in almost every large town, boys are found who desire the magistrate to save them from the vice and misery into which their friends are dragging them, and who find a delightful relief in renouncing home and its freedom, for the jail and its bondage, the company of parents and brothers for that of recognized "Delinquents."

Even at our own doors, children of years, which the painters and poets in every land delight to picture as full of innocence and purity, are growing up diseased, degraded, stupid, vicious, and sometimes ignorant as heathen of any Gospel knowledge.

This state of misery is not limited to our own country. Upon both sides of the Atlantic, in lands despotic and free, Protestant and Catholic, the "Cry of the Children," is rising to heaven.

When a pestilential disease stalks through the world, it is not enough that physicians bring relief to individuals that suffer. Should all the sick be healed, our guardians of health would not have done their duty, were they to make no general observations upon the character of the epidemic, its cause, its proper treatment, and the means by which it might in future be averted. The Crimes of Children are both noxious and infectious. "Reform" is prescribed for every case, and great institutions are set apart, like hospitals, for the cure of the social disorder. But this is not enough. It is important to study the diagnosis of crime, to inquire into its extent, its character, its causes, and its cure.

Within a few years past, the press in England has sent forth many valuable works upon the Crimes of Children. For various reasons, and especially on account of the differences in our civil organization, the inferences which these works present, are not always, nor even generally, of importance in this land. American philanthropists, on

the other hand, have been so much absorbed in that most important matter, the reformation of Juvenile Delinquents, that prevention of crime has not received the full attention it deserves. Yet on no subject is more investigation needed; on none is the coöperation of men in every social position, so much to be desired. The officers of police, city, and country magistrates, official and voluntary visitors among the poor, teachers in week-day and sabbath-schools, physicians, clergymen, all have it in their power to advance by observation and reflection, trains of research, which, if properly pursued, may develop the laws of crime, and suggest such means of prevention as will greatly diminish the present alarming extent of Juvenile Delinquency. The subject demands of philanthropists, not merely sympathy but study.

To stimulate inquiries in regard to the Crimes of Children, let us call attention to some of those points upon which investigation is most needed.

In the first place, it is important that *the character* of juvenile delinquency should be closely scrutinized. Such tables as are printed in the Reports of many of the Reform Schools, are far from giving to the public enough information. The classification of crimes which they adopt, is often based upon the official papers sent up by magistrates in different places, who do not agree in the principles upon which they pass judgment. We need fuller details than those which are contained in the simple words which are sometimes used to designate offences, "false pretenses," "stubbornness,"—even a knowledge of the circumstances under which the particular crime was committed that led to the offender's arrest.

We need also more full statistics in reference to *the extent* of juvenile delinquency. Every one knows that this is great, but who can give the figures? Even in those parts of our country where State Reform Schools and Houses of Refuge are established, not all young criminals are brought within their pale. Many still find their punishment in the city or the county jail. We also need such statistics as will show us the difference between city and country life, in the prevalence of crime, between Eastern and Western states, and especially such tables as will enable us to compare our country, and its democratic institutions with European states, and their fixed distinctions among classes.

These inquiries will lead very naturally to a third, the *causes* of crime among children.

We are well aware that the universal answer to this question is, that "their homes are bad." True as this is, it is not precise. We

need to know more, to follow up some such train of inquiries as this: Are the parents of the child living? are they able to work? are they intemperate? are they ignorant? have they ever been in jail? is the house comfortable? the table well supplied? what sort of books are in the family? have the children who are convicted ever been to church, to sabbath-school, to day-school? have they been allowed to go to the circus and the theater? where and with whom have they passed their play hours? have they ever been taught to work, or required to learn a trade? have they ever used ardent spirits? can they read and write?

The answers to such questions will soon bring us to learn what measures can be taken for *the prevention* of crime. Many instrumentalities of this kind are already efficiently at work; more can undoubtedly be contrived. In England, within a short time past, not less than twenty-five small "Homes" for poor boys, have been commenced on a plan not unlike that of DeMetz, at Mettray, and of Wichern, at Hamburg. It is important for us to ascertain whether such establishments are not far more serviceable in preventing crime, than all our large prisons. We do not conceal the fact of our own predilection for these "homes;" we desire to learn whether or not they are applicable to the wants and woes of our own land.

We likewise need an investigation more thorough than has recently been made into the proper plan of managing our Reformatory Institutions. Granting that crime cannot be entirely stopped by the best preventative agencies, it is important to learn how those who have commenced the criminal career, may be arrested in its progress.

For this purpose, let direct inquiries be made into the after lives of all who have been inmates of these penal establishments for youth. Let a careful examination be instituted into the comparative results of different courses of discipline. In a word, let the whole condition of existing houses of refuge, be brought before an enlightened and philanthropic public.

When the crimes of children, in their character, number, and causes, are fully understood; when the means of prevention are properly employed, and methods of reformation are rightly appreciated, one great portion of human misery and degradation now existing, will disappear, and one great step will have been made toward universal happiness and comfort.

To such investigations, the readers of this Journal will again be invited.

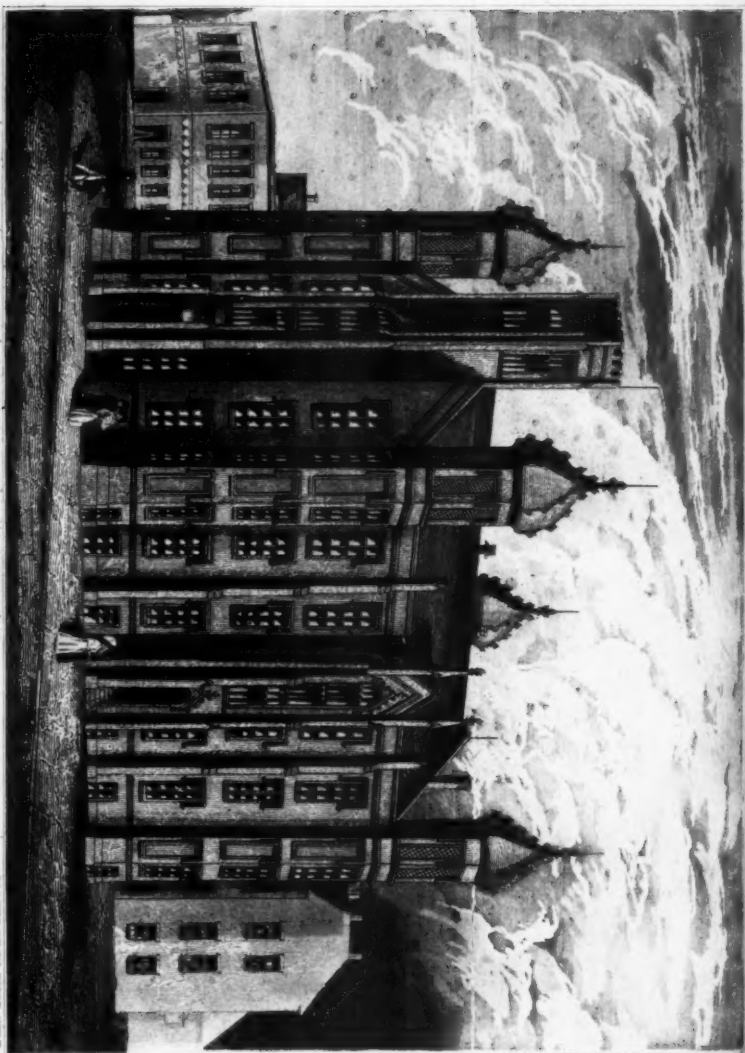
XII. SYSTEM OF PUBLIC INSTRUCTION IN ST. LOUIS.

THE system of public schools in St. Louis, although of recent origin, will compare favorably with that of any of the older cities in the United States, in the efficiency of its organization, the extent and thoroughness of its course of instruction, and the liberality with which its teachers are paid, school-houses provided, and its administration sustained.

Although selected as the site of a city as early as 1764, by Laclède, the first brick house was built within the present limits of St. Louis in 1813, and the first steamboat arrived in 1817, and down as late as 1830 the population amounted to only 6,694, and in 1837, the date of the first organization of the public schools, it could not have exceeded 12,000. By the United States census of 1850, the total population of the city, was 77,850, including 2,650 slaves, and by a local census in 1852, was 94,819. The assessed valuation of property, although below its real value, in 1853 was \$39,397,186, upon which a tax of \$41,400 was collected for city purposes. Of this tax, about \$280,00 was appropriated to the support of public schools, which was increased from the income of school lands and other sources, to \$87,000, in 1853-4. In pursuance of the wise policy early adopted by the General Government, in organizing new territories and states, to set apart a portion of the soil of each, to educational purposes, the act of Congress of 13th June 1812, makes it the duty of the United States Surveyor General in Missouri Territory, to survey and fix the out-boundary lines of certain old French towns and villages named in the act, and among them, St. Louis, "so as to include the out-lots, common field-lots, and commons thereunto belonging." If this provision of the act of 1812 had been strictly complied with, the out-boundary of St. Louis properly run, would have embraced large tracts of land, to which individuals had no rightful claims, and to which the growth of the city, in population and business has since given a value, sufficient to have supported a complete

* The principal items in this sketch are drawn from the first Annual Report of the General Superintendent (J. H. Tice,) of the St. Louis Public Schools, for the year ending July 1st, 1864, which contains a minute history of the growth of the system, the condition of the funds, and the schools.

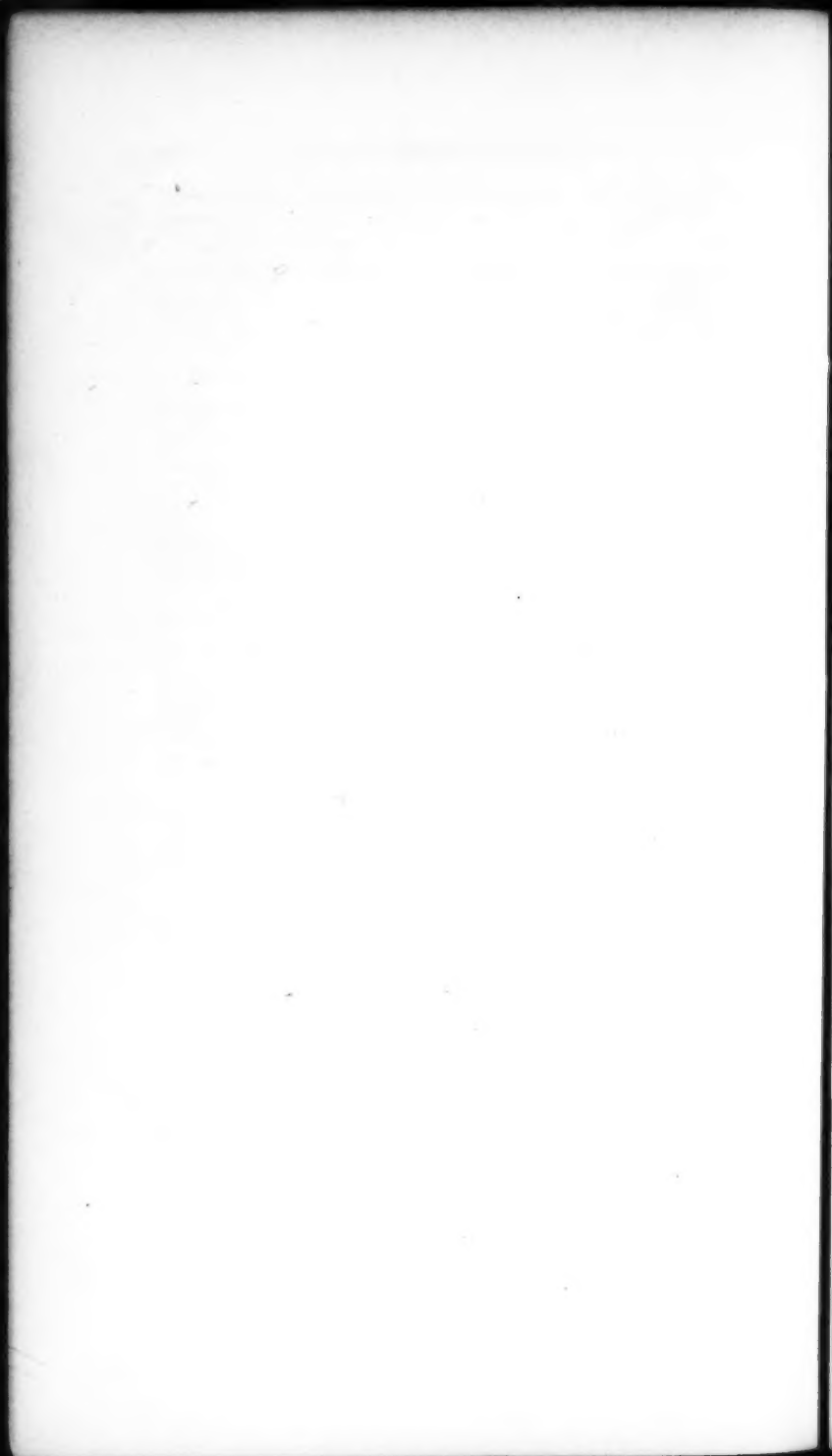




W. R. RICHMOND, ARCHT. & SURV.

HIGH SCHOOL.

J. M. KIRKMAN, ENGRAVER.



system of public instruction, from the primary school to the University, in its most perfect appointments of buildings, teachers, libraries, and apparatus. After twenty years of litigation, and expense of \$50,000, the friends of public schools have succeeded, mainly by compromises, in realizing thus far a fund of about \$400,000, which yields an annual income of about \$14,000. The lands belonging to the Board, are valued at about \$1,000,000.

On the 30th of January, 1817, the Legislature of the Territory of Missouri passed an act, entitled "An act to incorporate the Board of Trustees for superintending schools in the Town of St. Louis." This act appointed General Wm. Clark, William C. Carr, Col. Thomas H. Benton, Bernard Pratte, Auguste Chouteau, Alexander McNair, and John P. Cabanné, Trustees. The powers of this Board of Trustees, as specified in said act, were to "have full power, to take and hold by gift, grant, or otherwise, any estate either real or personal, which may be given for the use of schools, and to lease, rent, or dispose of, to the best advantage, all the lands and other property, which hath been, or may be given by Congress to said town for support of schools, and appropriate the same with the avails of what is rented or leased, as by the law directed, to employ teachers, to direct the studies of youth, to make by-laws, rules and regulations for the good government of said schools; provided, that said by-laws shall not tend to give a preference to any religious denomination whatever."

Under this act the Board was organized, on the 4th of April following, with General Clark, then Governor of the Territory, as president, and Thomas H. Benton, as Secretary. The latter continued to discharge duties as Secretary till 15th of February, 1827.

This Board did little else than assert, and that not very vigorously, their claim to the out-lots and common field-lots, reserved for the schools. In 1833, a new Board was provided for by the Legislature, composed of Directors elected for each ward of the city. On this Board appears the names of Edward Bates and Judge Leduc, and measures were forthwith taken to ascertain the value of the property, remove trespassers upon the same, take a census of the children, and propose a plan for a school-house.

In April, 1838, a public school was opened for the first time in St. Louis, and soon after a second, and from that time new buildings have been erected, and new schools established, until there were at the close of the school year, in 1854, twenty-eight schools, viz., 13 Primary Schools, 14 Grammar Schools, and 1 High School, with an aggregate of 75 teachers, and 4193 pupils.

On the first opening of the school, the parents of the pupils were
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required to pay a tuition fee of \$2.50 per quarter, which in 1847 was abandoned, and the schools made free to all, poor and rich.

The Directors commenced with paying the teachers a rate of compensation, which at the time commanded the best educational talent in the country. But a different policy, obtained after two or three years—the salary of teachers were reduced—good teachers could not be secured, and, if obtained, could not be retained against the competition of better wages elsewhere. A constant change of teachers, and but few applicants of the right sort, was the result. Under these circumstances, Mr. Tice introduced the following resolutions to the Directors, which, after an animated discussion, were adopted :

Resolved, That an examination of applicants for situations as teachers, be held on the 5th day of July next, and that the Secretary give notice in the public prints, of the time and place of said examination. And farther, be it

Resolved, That in the event this Board should not be satisfied with the qualifications of such applicants as may present themselves ; or in the event, that not a sufficient number of persons qualified to teach, shall present themselves for examination : then this Board will employ an agent to proceed to the eastern cities to hire the requisite number of professional teachers ; and that the President and Secretary be authorized to employ said agent to carry this resolution into effect."

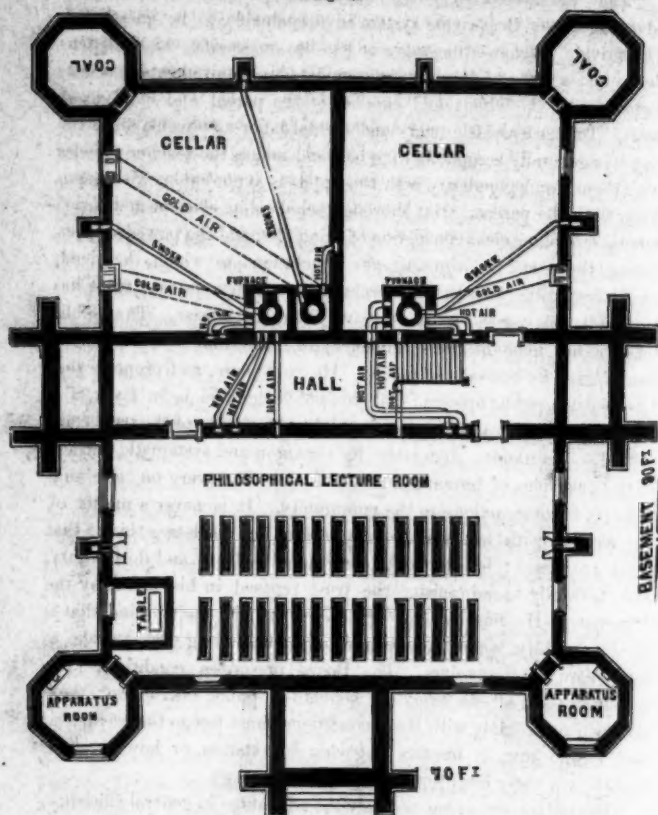
Mr. Edward Wyman, principal of the best private school in the city, was appointed the agent, and faithfully discharged the duties imposed. In August, he returned from the east, taking with him fifteen teachers, several of whom are still in the employ of the Board. Upon their entrance upon the duties assigned them, they immediately established friendly, cordial, and confidential relations with the teachers before employed. Consultations for mutual information, and interchange of views took place ; a Teachers' Association was formed ; and by its deliberations, the present system was established, and a systematic course of instruction was adopted for all the schools. A scholar can change schools from one part of the city to another without any loss of time or progress. Go where he will, he will find the same principles of classification, the same studies, the same text books, and substantially the same methods. This work was accomplished by the teachers, in the meetings of the Association, acting in harmony with the Directors.

In view of the experience of St. Louis, the Superintendent makes the following remarks on the cost and efficiency of private schools as compared with good public schools of the same grade.

"That the system of public instruction possesses immeasurable advantages over the private system is too palpable to be questioned. The private teacher either more or less has to sacrifice his independence and a sense of duty, to accommodate his requirements to a conformity with the whims and caprices of the parent and child, or of both. To exact as little study and mental labor as possible from the pupil, is generally acceptable to pupils, and makes the teacher popular with them; and popularity with the pupils is synonymous with popularity with the parent. But thorough scholarship, efficient and varied mental discipline, clear conception of principles, and the power of elucidating them, and legitimating the conclusions to which they lead, are incompatible with the tenderness with which a private tutor has to handle his pupils, so as to give them no offense. The public teacher has none of these influences to make him swerve from the line of duty for the sake of policy. He, to be sure, and properly too, is subject to public opinion; but this public opinion is in favor of a fearless performance of duty, and a faithful discharge of the trust committed to his hands. It is only by a wanton and systematic outrage of the principles of humanity, that a teacher, like every one else that does so, becomes odious to the community. It is never a matter of any concern with him whether he pleases or displeases this or that child, or parent; but his only concern is, to know and do his duty, and faithfully to administer the trust reposed in his hands by the Directory. He has but one rule to govern his conduct, and that is the line of duty, which he is bound to pursue, letting consequences take care of themselves. The Board prescribes conditions upon which any and all can enjoy the benefits of public instruction: those who will not comply with these conditions, must forego the privileges; and for no man, it matters not what his station, or how great his wealth, will these conditions be changed.

"The public system has not only the advantage in general efficiency, but also in economy. In our Primary Schools, the average annual cost of educating one pupil is about five dollars; in private schools it averages thirty-six dollars; in our Grammar Schools the average annual cost is about \$12 75; in private schools for the same studies the average is \$60; in our High Schools the average annual cost of educating one pupil is about \$30; in private schools the same studies, average \$90. The average annual cost per pupil in all the Public Schools for the year just closed was \$10 32; in private schools the average is \$50, per head.

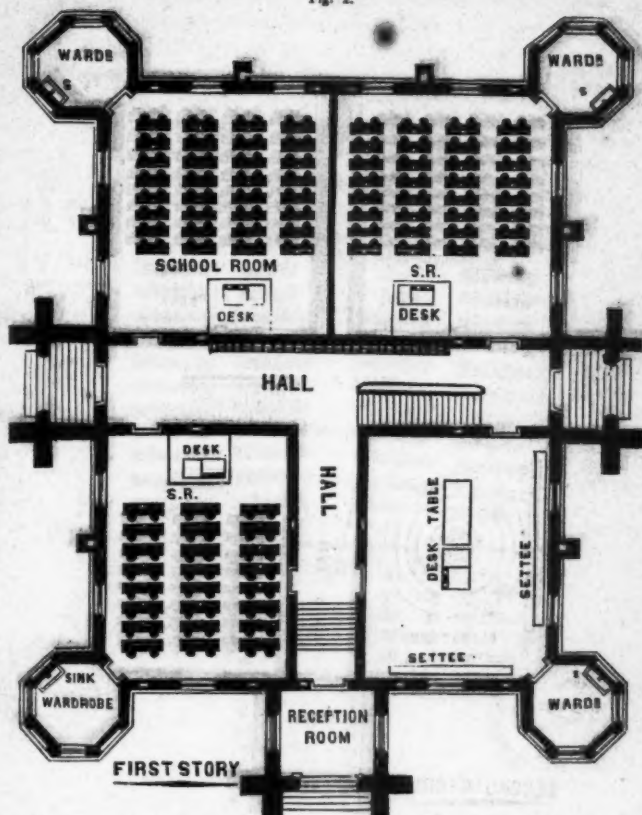
Fig. 1.



PLANS AND DESCRIPTION OF THE BUILDING DESIGNED FOR THE PUBLIC HIGH SCHOOL OF ST. LOUIS, MISSOURI.

The building in its extreme length is one hundred and six feet; and in its extreme width eighty-four feet, including towers and transepts. The body of the building is eighty-four feet, by sixty-seven; main height seventy-one feet; and to the apex of the roof eighty-six feet. Front square tower, used respectively in each story for reception room, library, museum, and astronomical observatory, is one hundred and six feet high. Octagonal tower flanking each corner, is one hundred and two feet high. The wings or transepts on the sides, are thirteen by seventeen feet, with large gothic windows, seven by thirty-four feet. A similar window is in the large square front tower. All the windows have large cast iron hood moldings painted in imitation of stone; buttress caps, string courses, and wall copings, also of cast iron, and finished in the same manner; the roof is covered with slate, with copper gutters.

Fig. 2.



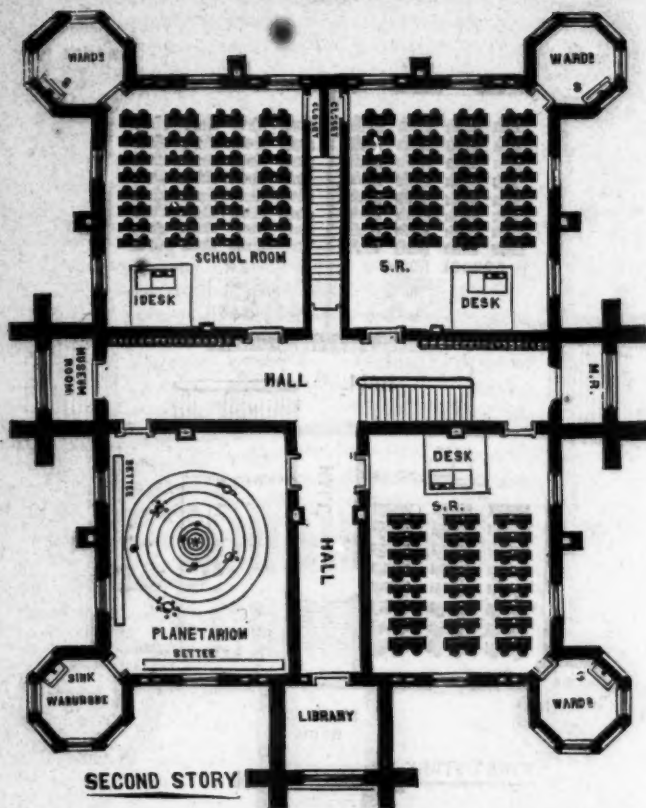
Transverse and longitudinal halls, divide the first and second stories into four rooms each, and each room is capable of accommodating seventy scholars.

The desks are supported in an entire new style, by means of a cast iron peristyle, with large pedestal and four claws for screws. The peristyle is placed in the centre of the desk, adding much to the comfort, cleanliness, quiet, and free ventilation of the room. The desks are made of cherry and varnished. The chairs, which are on the arm chair fashion, are supported similarly to desks, move on a pivot so as to turn one-quarter way round, and the iron work of both desk and chairs are neatly bronzed.

Wardrobe rooms in the towers, are attached to each school-room, with hydrant, and iron sinks for washing and drinking purposes.

The philosophical and chemical lecture-room in the basement, is sixty-one feet by thirty-one feet, with apparatus rooms in towers, with sinks and water; also,

Fig. 3.

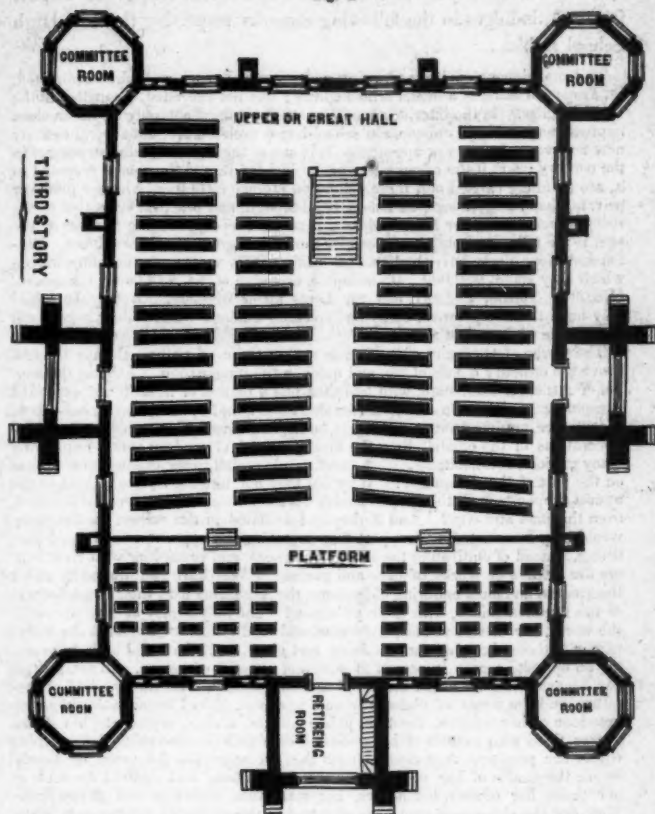


two fire places at each end of the room for experiments in chemistry and philosophy. There are stairs leading directly to the philosophical and chemical lecture-room. The other basement is used by three furnaces for heating the building.

The upper, or great hall in the third story, being the full size of the building, is large and commodious, capable of accommodating six hundred persons. A large platform, twenty feet deep, and the width of the building is at the south end of the hall, to be used by scholars on examination day, and for recitation, declamation, and reading their exercises; also, for a stand for lecturers. There is a retiring room behind the platform in the front tower, for scholars to prepare themselves for performing respective parts in dialogue, &c. From this retiring room a flight of stairs ascends to the astronomical observatory.

The rooms in the octagonal towers of the third story are intended for committee

Fig. 4.



rooms for directory, or for private conference of teachers and parents, or friends, at general exercise, or on examination day. There are two museum rooms in the second story of the transepts, one for males and the other for females.

The entrance or reception room, for strangers and parents, is in the first story of the observatory, or front square tower on Olive street. Over the reception room is the library room. Perfect and thorough ventilation is aimed at, and the latest improvements to attain it, adopted. The stairs are broad and direct, giving free and easy access to, and from the building at all times, and securing against all accidents in case of alarm of fire, &c.

All the finishing of the school-rooms and halls, are grained oak, and varnished. Wardrobe rooms are to be supplied with double clothes' hooks; halls with umbrella racks, troughs, and places for overshoes, all made of cherry and varnished.

Mr. Tice, the Superintendent of the Public Schools, in his Report for 1855, indulges in the following remarks respecting the new High School Edifice:

This magnificent edifice is drawing near to completion; and when completed, St. Louis can boast of a model school edifice; one not exceeded, if equalled in the United States. In the interior arrangements it contains not only all the modern improvements and conveniences in school-house architecture, but several entirely new features. In exterior appearance it is one of the most imposing structures in the country; and if the organization prescribed for it, and the course proposed in it, are faithfully carried out, there will be no literary institution, whether public or private, that will give such an extensive, thorough, and practical education to the rising generation as our High School. Among the encouraging features of the age, is the munificent appropriations for the higher grade of school edifices. Boston and New York have high school edifices that cost each, including lots on which they stand, \$80,000. Philadelphia, exclusive of lot, \$43,000. Cincinnati, \$28,000. Toledo, \$32,000, and St. Louis about \$50,000. It may be asked why build these impressive, costly and splendid edifices, when plainer houses will answer the purpose just as well?

The works of taste and of genius, as well as those of nature, elevate the soul above the ordinary details of life, and quicken the imagination. Athens, the capital of Attica, a small state, with less than half a million of inhabitants, expended more in costly edifices, in ornaments for altars and temples, in statues, in bas-reliefs, in sculpture, in hippodromes, aqueducts, baths, fountains, and in embellishments and decorations of the citadel, than the most powerful of modern states, numbering many millions of inhabitants. * * * Were all these expenditures useless on the part of the Athenians? Why did they not, like the Spartans, hold to the utmost simplicity in all things, and banish works of taste, and the arts and sciences, from the state and city? And if they had imitated in this respect the Spartans, would they have acted a wiser part than in taking the opposite course; and banishing, instead of cultivating the arts and sciences, and rewarding with civic honors the authors of works of taste and genius? Who have laid humanity under the greatest and most enduring obligations, the Athenians with their magnificence, or the Lacedemonians, with their plainness? The only legacy of Lacedemon to the world, her heroic virtues, are embalmed and transmitted to us in the literature of Athens, her rival for dominion and glory, and who found both in pursuing an opposite course in regard to works of art and of genius. In art, Athens has forever given the world models of taste and beauty, fixed the standard of literature, and the terms of philosophy and science. Why? because the imposing grandeur of her temples, theaters, public edifices, arches, aqueducts, her sacred groves, filled with statues of her gods and demigods, her assembling every thing within her precincts that could charm the eye or gratify the sense of beauty, awoke the genius of her people, fired the imagination, and inspired the souls of her poets, her orators, her heroes, her statesmen, historians and philosophers. Time and the violence of man have swept away the evidences of her power, piety, taste and luxury; but the forms of taste and beauty to which she gave birth, linger yet in the broken column, ruined arches, defaced statues and crumbling edifices; and it is the highest ambition of modern artists to imitate or re-produce them. The stones of Athens will forever remain the instructors of mankind.

A splendid edifice is not without its uses to the community in which it stands. It is an expression of the refinement, public spirit, and taste of that community. The old behold it with pleasure, because it lights up their fancies with brilliant images; and the young with both pleasure and profit, because it speaks to them of grandeur and elevation, which shadow forth an ideal beauty that they are to copy in their lives: for vice and immorality have their roots in the gross hearts and perverted tastes of men.

XIII. LETTERS TO A YOUNG TEACHER.

BY GIDEON F. THAYER.

Late Principal of Chauncy Hall School, Boston.

INTRODUCTORY LETTER.

MR. EDITOR :—In quitting the position of a teacher, which I have occupied for over forty years, I find myself not wholly free from the feelings that induced the veteran retiring tallow chandler to solicit the privilege from his successor, of being allowed on *dipping days*, to go into the shop and lend a hand in the prosecution of his long accustomed craft. But presuming that such an arrangement might not be satisfactory to *my* successors in the school-room, I ask the privilege of contributing some of my notions on the subject of *school-keeping*, to the pages of your Journal.

I claim little originality of method in the processes I adopted, or in the details of my routine of labor, which the ardent and conscientious teacher would not, as a general thing, find to result from a long course of determined efforts in the management and instruction of a large school. Still, my younger brethren, however gifted by nature, and improved by education and the study of books, and even with the advantages which result from the Normal School—that blessed institution of modern days—an institution whose aid every individual, male or female, who intends to become a teacher, should if possible secure, cannot reasonably be supposed to anticipate all the variety of mental machinery which it is necessary to put in operation, to secure the results at which the educator should aim, in adopting as his regular vocation, this important department of human labor. He may have a love for imparting knowledge; he may be ambitious of writing his name on the roll of fame, side by side with those who by the common consent of civilized man, have made the world their debtors, by their successful efforts for the improvement of the race. Still, something more is requisite—is indispensable to the complete success at which every teacher should aim—should resolve on at the outset of his course.

It would be almost unpardonable, at this period of the world's history, to attempt to show the necessity of education, the value of

knowledge, the worth of sound principle, the advantages of self-control, the heaven-described requisition of "purity in the inward parts;" and all those subjects connected with the intellectual, moral, and social nature of man, which so properly enter into the school training of the youth of our country at the present time. This, therefore, is taken for granted; but, is it equally obvious that the young teacher has adopted this sentiment? Has made it the very basis of his action in the school-room? Has settled it in his resolution or purpose, that all these things are to be indissolubly connected with his plan of action? If he has not done this, his programme is essentially defective; and, if he has, the probability is that he will be aided to no inconsiderable extent, in the pursuit of his object, by the suggestions that experience may make, thus sparing him many a toilsome year of experiment, and saving his pupils from the disadvantages of inevitable failures, and, perhaps, from the infliction of unintentional injustice at his hands.

With these views, and for the satisfaction of still doing something in the way of instructing the race,—when I shall no longer be, Sir Walter Scott's "tyrant's of childhood,"—I propose, by your permission, Mr. Editor, to furnish a few letters for successive numbers of your periodical, addressed to a young teacher, in the hope of aiding, indirectly, the youth of our country in their efforts to become what that country has a right to hope and expect from them, when they shall enter on the duties of adult life, and, in their turn, help to shape the destinies of their native land, and of the world.

[We shall gladly welcome to our pages any communication, which our fellow laborer in the field of educational improvement, may forward for this purpose, and we, and our readers, we feel assured, will be happy to receive not a few, but many letters on the practical duties of the school-room, in which our respected friend has had so long, and such eminently successful experience. We take this occasion to say, that the readers of the Journal will be favored with similar communications from other eminent teachers in other departments of education.—EDITOR.]

XIV. DEPARTMENT OF PHILOSOPHY AND THE ARTS

IN YALE COLLEGE

THE necessity of schools for thorough instruction in the various sciences and practical arts, is strongly felt throughout our land, and within a few years, many institutions have been projected to supply this deficiency in our systems of Education.

To meet this demand, the Corporation of Yale College, established in 1846, two professorships, one of Agricultural Chemistry, the other, of Chemistry applied to the Arts, to the first of which, John Pitkin Norton, to the latter, Benjamin Silliman, Jr., were appointed.

At a meeting of the Corporation, in August, 1847, a committee, appointed in August of the previous year, "to consider the expediency of arranging under a distinct department of the University, those courses of instruction which are, or may be given, to others than members of the undergraduate classes, and which are not included in the departments of Theology, Law, and Medicine, and that if in their opinion such a department is expedient, they report such arrangements and regulations as may be requisite for the full organization of the department,"—reported as follows :

That in their judgment it is expedient to form such a department, and that for several reasons. Some of these reasons are :

1. That there is a demand on the part of our graduates and others, for instruction in particular lines beyond what is wanted, or can be given in the college course.

2. We have several endowed scholarships for graduates, and are likely to have more; and the advantages arising from these endowments, will be greatly increased by having instructions provided for the scholars upon them, and not leaving them to themselves.

3. From time to time new branches of study are called for by the public; which if introduced into our undergraduate course, would greatly crowd it and interfere with its object as a course of training for the mind.

4. It is believed that students resident here for the purpose of pursuing a specific branch will be industrious, and will have a good effect in promoting the spirit of study among the undergraduates.

5. We have at present the materials of such a department here on the ground. It is believed by your committee, that some system introduced into them, will greatly add to their usefulness.

Your committee being also charged with the duty of reporting *regulations* for the organization of said department, should it be judged expedient to form one, beg leave to report the following :

1. There shall be a fourth department of instruction for other than undergraduate students, who are not in the departments of Theology, Medicine, and Law, to be called the 'Department of Philosophy and the Arts.' The department is intended to embrace Philosophy, Literature, History, the moral sciences other

than Law and Theology, the natural sciences excepting Medicine, and their application to the Arts.

2. Instruction in this department may be given by professors not belonging to the others, by professors in the Academical departments, and by such others as the President and Fellows may approve. But no second course of lectures on the same branch may be given, without the consent of the previous lecturer.

3. All graduates of this or other colleges, and all other young men of fair moral character, may be allowed to pursue such studies included in this department, as they may desire. But dismissed students of this or other colleges, and undergraduate students, without express leave of the Academical faculty, shall not enjoy the privileges of this department.

4. The instructors in this department may make such arrangements as it respects remuneration for their instructions, as they may think proper.

5. The faculty of the department shall consist of the president, and such professors as are actually engaged in the instruction of the department; and regulations passed by the faculty, and approved by the Corporation, may be the regulations of the department.

In 1851, the Corporation established the Degree of Bachelor of Philosophy in this department, to be conferred by the President and Fellows, under the following rules :

1. Students in this department, of the age of 21 years, who have resided at the college two years, and have pursued their studies for nine months in each year, may receive, on examination, the degree of *Bachelor of Philosophy*.

2. The examination shall embrace, at least, three branches of study, and a certificate of the examiners must be produced to the effect, that the examination in each branch has been satisfactory.

3. This examination in the case of students in the physical sciences, shall embrace two departments of physical or mathematical science, and either the French or German language.

Under this action of the Corporation, the Yale Scientific School was organized; and lectures and instruction by Professors connected with other departments of the University, were provided for in studies not included in the courses of Theology, Law, and Medicine.

The following is the Programme of the Lectures and Instructions in the department of Philosophy, for 1856.

Professor GIBBS, on General Philology.

Professor OLMSTED, on Natural Philosophy and Astronomy, the Academical courses of Lectures. Also if desired, private lessons in experimental physics and mathematical astronomy.

Professor NOAH PORTER, on Psychology, Logic, and the History of Philosophy.

Professor TEACHER, Lucretius and Latin Composition; instruction twice a week.

Professor HADLEY, Pindar and Theocritus; instruction twice a week.

Professor WHITNEY, Sanskrit from Bopp's Grammar and Nalus, or such other text books as may be agreed upon. Also the rudiments of the Ancient and Modern Persian, and of the Egyptian languages.

The branches of Chemistry, Natural Science and Engineering are embraced under the title of the YALE SCIENTIFIC SCHOOL.

The division of the school, embracing Chemistry and Natural Science, is under the immediate supervision of Professors James D. Dana, Benjamin Silliman, Jr., and John A. Porter, with Mr. Samuel W. Johnson, First Assistant, and Professor Charles H. Porter, Second Assistant.

The students in Chemistry engage in a systematic course of experiment in Analytical Chemistry, in which they are superintended by

the Instructors. The following are among the particular applications it includes:—The analysis of grains, soils, minerals, the determination of the commercial value of drugs and chemicals, and experiments in Medical Chemistry. Previous study of Chemistry is not essential to admission.

The Lectures for 1856, are as follows:

FIRST TERM, *General Chemistry*—Professor SILLIMAN, Jr.

SECOND TERM, *Mineralogy and Geology*—Professor DANA.

Chemistry Applied to the Arts—Professor SILLIMAN, Jr.

Agricultural Chemistry—Professor JOHN A. PORTER.

THIRD TERM, *Chemistry of Building Materials*—Professor SILLIMAN, Jr.

Chemical Philosophy—Professor JOHN A. PORTER.

The whole course occupies two years.

The division of the school, embracing Engineering, is under the supervision of Professor William A. Norton, assisted by Alonzo T. Mosman, B. Ph. The course of instruction embraces the following studies and exercises.

Surveying, in all its branches, with the adjustment and use of instruments, and operations in the field.

Drawing.—topographical, geometrical, mechanical, architectural; with shading and tinting. Descriptive Geometry.—Shades and Shadows—Linear Perspective—Isometrical Projection; pursued in connection with systematic exercises in geometrical drawing.

Applications of Descriptive Geometry to Masonry and Stone-cutting, in the construction of Arches, &c., and to Civil and Mechanical Engineering, generally.

The Principles of Architecture.

Analytical Geometry, and Differential and Integral Calculus.

Mechanics, including Hydraulics and Pneumatics: Application of Mechanics to Machinery and Engineering.

The Science of Construction in its various departments; with a discussion of the nature, strength, and mode of preparation of building materials.

Engineering field-work; or the location of roads, surveys for excavations and embankments, &c. Use of Astronomical instruments for the determination of time, latitude and longitude, &c.

The lectures of Professor SILLIMAN, Jr., during the third term, on the Chemistry of Building Materials, are open to the students; and also the lectures of Professor DANA, on Mineralogy and Geology, those of Professor SILLIMAN, Jr., on General Chemistry, and those of Professor OLMSTED, on Natural Philosophy, Astronomy, and Meteorology, in the Academical Department.

The full course occupies two years. Students will be admitted to pursue a full or a partial course, at their option. The preparatory mathematical studies required for admission to the full course, are Arithmetic, Algebra, Geometry, and Trigonometry.

The tuition fee for the full course, for each term, is \$30, to be paid in advance. The fee for the course of Surveying alone is \$12. The Matriculation fee is \$3. There is no charge for incidental expenses.

Students in this School have access to the College Library, and to the mineralogical and geological cabinets.

The Degree of Bachelor of Philosophy will be conferred by the President and Fellows, upon students in the Department of Philosophy and the Arts, after being connected with the Department for two years, and passing a satisfactory examination in three branches of study.

In the case of students connected with the divisions of Chemistry or Engineering, the two departments of science on which this examination for a degree is held, must both be pursued in the same division of the school.

Although the school has continued on, and has been behind none in the country, in the number and character of its students, it has been unable, from its poverty, to fulfill its aim. It has no adequate building, having only the use of a small dwelling house, which is soon to be removed. It has no collections of models or specimens in any department; it has no income for Professors' salaries beyond three hundred dollars a year; it has not the means even of meeting its current expenses, and paying the requisite assistants. Where a European school of similar character has its endowments of hundreds of thousands the Yale Scientific School has but five thousand dollars.

An appeal has just been made by the Faculty of the Yale Scientific School, to the public for funds, to enable them to meet the immediate necessities of this department of the College, and to give to it an expansion and efficiency corresponding to the demands of the times. According to this appeal, the immediate necessities of the school are:

"1. A building which shall accommodate the students of Analytical and Agricultural Chemistry, the Engineering Department, and the Mining and Metallurgical Department.

2. Collections of Models, Apparatus, and specimens to illustrate the subjects of Engineering, Agriculture, Mining, and Metallurgy; for example, in Engineering, models of Bridges, Railroads, Machinery, and collections of apparatus, and of specimens of building materials, etc., in Agriculture, collections of Agricultural Implements, and Products, grains, woods, soils, etc.

3. A fund for the Professorship of Agricultural Chemistry.

4. A fund for the Professorship of Applied Chemistry.

5. A fund for the Professorship of Metallurgy.

6. A farm for practical farming, and for experiments in Scientific Agriculture, etc., and connected therewith, instruction in Farming in all its branches including the Rearing of Stock, Dairy Farming, etc., Agricultural Botany and Zoölogy, the diseases of Plants and Animals, Forestry, etc.

7. A fund for the general necessities of the Chemical Laboratory as regards Assistants, Apparatus, Materials, etc.

Beyond this, the school needs the means of expansion, by adding to its number of Professorships as may be required; as for example, Professorships of Architecture and Drawing in the Engineering section, of Mining, of Botany, etc.

It may also be added, that a Museum of Zoölogy and Botany, is essential to carry out fully the purposes of the school; and for this end, a building for collections would be required and a fund for a Curator, and the incidental expenses.

We thus lay the case before the friends of progress throughout the country. We believe that the vicinity of a college, distinguished for the thorough scholarship of its graduates is especially favorable for the highest success of such a school. There are extensive libraries at hand which are available to its students. There is also the largest collection of minerals in the country, and a well supplied cabinet in Geology. There is also a large corps of Professors in the college, whose lectures will be accessible. Moreover, the number of students gathered here from every section of the country, will spread widely a knowledge of the school, while at the same time, many will avail themselves of the opportunities thus afforded for completing their education. Thus the institution instead of gathering in only those who have had little education elsewhere, and taking, consequently, an inferior position, will have a foundation of scholars, and rise to a high standard of learning.

In view of the fugitive nature of private property in this country, and the certainty that in a generation or so it will be distributed and merged again in the common mass, it is plain that the permanent disposition of wealth is in no way more effectually secured than by its bestowment on institutions of education or benevolence. Thus applied, it will benefit posterity, and remain a monument to the enlightened liberality of the donor.

During its whole existence, Yale College has shown itself a safe and prudent trustee of all funds committed to its keeping; and no better guarantee can be desired than its history furnishes for the faithful appropriation of all funds which the future may place at its disposal. The names of Governor Yale, and Bishop Berkeley, of Clark, Munson, Perkins, and many others, are inseparably and honorably connected with her history, and are destined to live forever in grateful remembrance.

We ask of the public spirit and benevolence of the present day, similar benefactions, to give this new department of the institution, an efficiency corresponding to the demands of the times."

XV. THE EDUCATIONAL INTEREST OF THE UNITED STATES.

The following Tables and Summaries have been prepared for the purpose of bringing into a condensed form, the principal elements for estimating the magnitude of the Educational Interest of the United States, to the advancement of which, the American Journal of Education will be devoted.

I. The extent of Territory over which the population of the United States is spread; together with the area of the other American States.

II. The Population of the several states, at decennial periods, with the Juvenile Population of each state, according to the census of 1850.

III. The number of Colleges, Academies, and Public Schools in each state, together with the number of students and instructors, and the annual income from all sources, of each class of institution, in 1850.

IV. The number of students returned, as belonging to the different educational institutions; and also the number of persons returned by the heads of families, as attending school in 1850, in each state.

V. The number of persons over 20 years of age, returned as *not being able to read and write*, in each state, in 1850.

VI. The number of Newspapers, and their circulation, and Libraries and volumes in each state in 1850.

VII. The amount of Funds set apart for Schools and Colleges, and other educational purposes in each state, together with a summary of the number and condition of Colleges, Professional or Special Schools, Common or Public Schools, Normal Schools, Reform Schools, and Institutions for the Deaf-Mutes, Blind, and Idiots in each state, for, or near the year 1854-5.

VIII. The statistics of Crime, Poverty, Insanity, and Idiocy.

IX. The number of persons engaged in agricultural and manufacturing pursuits, with the capital invested, and value of the productions in each department, in reference to the establishment of Special Scientific Schools for each class.

X. The population of the principal cities and towns in each state, in reference to the peculiar educational wants of such communities.

XI. Population and Territory of the several European States, with a summary of their Educational statistics for the purposes of comparison.

EXHIBITING THE POPULATION, TERRITORIAL EXTENT, AND EDUCATIONAL STATISTICS
OF AMERICA, AND PARTICULARLY OF THE UNITED STATES.

NORTH AND CENTRAL AMERICA.				WEST INDIAN ISLANDS.				SOUTH AMERICA.			
States, &c.	Ext. in sq. ms.	Pop. near 1850.	States, &c.	Ext. in sq. ms.	Pop. near 1850.	States, &c.	Ext. in sq. ms.	Pop. near 1850.			
Greenland, &c.	380,000	10,000	Haiti,	10,081	572,000	New Grenada,	591,948	2,343,054			
Arctic U. & L.	600,000		Dominion,	17,609	136,500	Panama,	27,346	138,108			
Russian America,	481,976	78,000	Cuba,	47,378	1,009,000	Bonduar,	297,638	665,000			
British America,	2,878,338	2,568,015	Porto Rico,	3,865	447,914	Venezuela,	426,712	1,149,336			
Hudson Bay Ter.	2,436,000	80,463	Bahamas,	5,094	27,519	Guiana, British,	96,000	127,695			
Canada,	327,822	184,265	St. John's Island,	430	4,428	Dutch,	59,765	61,089			
New Brunswick,	27,704	193,800	Jamaica,	6,350	377,433	French,	27,560	22,010			
Nova Scotia,	18,746	276,117	Cayman,	260	1,760	Peru,	2,973,400	6,065,000			
Prince Edward's Is.	2,134	62,678	Trinidad,	2,020	68,645	Brazil,	498,726	2,115,493			
Newfoundland,	35,913	101,600	Tobago,	144	13,208	Bolivia,	473,298	1,447,000			
Bermuda Island,	19	11,092	Granada,	155	32,671	Chili (and West					
St. Vincent,	118	1,338	St. Vincent,	132	30,128	Patagonia),	249,952	1,133,862			
St. Lucia,	823,916	276,117	Barbadoes,	166	135,330	Argentina Rep.	786,000	764,000			
St. Kitts,	7,661,520	10,710	Dominica,	296	94,516	Paraguay,	72,106	300,000			
British Honduras	19,200	10,710	Montserrat,	274	22,061	Uruguay,	73,538	120,000			
Central America	200,000	1,996,000	Antigua,	108	7,653	Patagonia (East	210,000	300			
Guatemala,	28,000	971,000	St. Christopher	68	23,177	of Andes),	6,396	560			
Honduras,	73,000	308,000	St. Bartholomew,	72	1,707						
Nicaragua,	48,000	247,000	Nevia,	21	9,601						
San Salvador,	13,000	363,000	Anguilla,	34	3,052						
Costa Rica,	101,000		Virgin Islands	92	6,689						
Merquito,	25,000	6,000	French	631	154,975	N. & C. Am.	8,500,000	40,000,000			
			Guadalupe,	382	121,478	West Ind'n Is.	150,000	4,000,000			
			and depend.	244	22,063	South Am.	6,700,000	18,000,000			
			Martinique,	97	1,332		15,350,000	62,000,000			
			Curacao, &c.	244	22,063						
			St. Eustatius,	97	1,332						
			St. Martin, &c.	98	4,502						
			St. Cruz, &c.	127	39,623						
			Danish.	25	9,000						
			St. Bartholomew, Swedish								

RECAPITULATION.

Territory.	Population.
N. & C. Am.	8,500,000
West Ind'n Is.	150,000
South Am.	6,700,000
	15,350,000
	62,000,000

TABLE II. POPULATION OF THE UNITED STATES

STATES AND TERRITORIES.	CENSUS OF 1790.				CENSUS OF 1800.				CENSUS OF 1810.				CENSUS OF 1820.				Total.
	Popu- lation in 1790.	Whites.	Free colored.	Slaves.	Total.	Whites.	Free colored.	Slaves.	Total.	Whites.	Free colored.	Slaves.	Total.	Whites.	Free colored.	Slaves.	All other persons*.
Maine.....	10,000	98,009	538	.....	98,546	150,901	818	.....	151,719	227,730	969	.....	228,705	397,340	929	.....	398,335
New Hampshire.....	10,000	141,111	630	158	141,899	418,708	656	.....	419,364	213,360	970	.....	214,330	243,268	786	.....	244,101
Massachusetts.....	10,000	574,694	3,469	552	578,715	1,052,707	3,704	881	1,056,392	477,031	3,737	108	478,000	543,268	3,840	.....	547,108
Rhode Island.....	10,000	224,684	2,469	.....	227,153	455,377	3,204	.....	458,581	273,311	6,737	.....	279,048	315,123	7,554	46	322,623
Connecticut.....	30,000	232,581	2,801	2,759	238,141	944,731	5,330	951	950,000	935,279	6,433	310	941,713	997,161	7,644	97	949,454
Vermont.....	30,000	85,144	255	17	85,516	133,008	557	.....	133,565	216,083	750	.....	216,833	334,546	963	.....	335,509
New York.....	30,000	314,149	4,654	91,234	340,130	556,039	10,374	20,343	586,756	916,963	25,323	15,017	932,744	1,332,744	29,579	10,689	1,372,812
New Jersey.....	15,000	169,954	2,762	11,423	184,139	195,125	4,402	12,422	211,949	236,881	7,843	10,851	248,535	327,409	12,400	7,537	337,575
Pennsylvania.....	50,000	494,099	6,537	3,737	494,373	586,094	14,561	1,706	602,361	786,804	22,492	705	810,091	1,017,094	30,902	149	1,048,458
Delaware.....	25,000	46,310	3,669	8,677	59,056	40,852	8,968	6,153	55,073	55,261	13,126	4,177	72,674	55,982	12,958	4,509	72,749
Maryland.....	25,000	208,649	8,043	103,036	319,728	216,390	19,587	105,035	341,448	225,117	33,987	111,502	369,546	280,525	39,730	107,397	407,350
Virginia.....	40,000	442,115	12,766	283,427	748,308	514,260	59,134	345,796	899,200	370,410	33,570	392,316	974,692	602,067	36,889	425,153	1,065,279
North Carolina.....	5,000	268,304	4,973	.....	273,277	385,707	7,041	.....	392,748	475,103	10,360	.....	485,463	535,500	14,612	.....	550,112
South Carolina.....	7,000	107,604	1,076	.....	108,680	198,255	2,865	146,151	199,016	145,414	1,801	105,318	220,732	199,566	7,063	149,652	340,987
Georgia.....	.....	32,836	308	29,394	62,548	101,671	1,919	59,404	103,101	145,414	1,801	105,318	220,732	199,566	7,063	149,652	340,987
Florida.....	.....	61,133	114	11,830	73,077	179,871	741	40,343	220,955	215,377	1,713	80,561	406,511	434,644	9,759	126,729	532,113
Alabama.....	.....	32,013	361	3,417	35,791	91,709	209	13,554	105,602	215,377	1,713	80,561	406,511	434,644	9,759	126,729	532,113
Mississippi.....	.....	.....	.....	.....	.....	45,098	237	.....	45,365	228,681	1,909	.....	230,590	376,572	4,723	.....	381,315
Illinois.....	.....	.....	.....	.....	.....	4,577	163	135	4,875	33,890	303	227	34,420	145,756	1,230	190	147,176
Indiana.....	.....	.....	.....	.....	.....	5,179	189	.....	5,368	22,024	240	17,090	22,330	42,176	458	32,814	75,448
Ohio.....	.....	.....	.....	.....	.....	10,006	783	3,244	14,093	16,079	2,349	5,395	21,623	22,614	4,048	6,377	27,991
Michigan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,501	613	168	12,282	53,788	457	917	55,311
Wisconsin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,618	190	94	4,902	8,591	174	60,984	69,669
Minnesota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37,311	7,583	34,669	79,563	73,546	10,476	8,596	135,977
Illinois.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17,247	607	5,011	22,865	55,685	571	41,879	137,600
Alabama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	85,451	59	1,617	14,573
Florida.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,279	59	1,617	14,573
Wisconsin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Aggregate.....	202,000	3,172,464	29,466	697,897	3,900,827	4,304,469	105,305	893,041	5,302,815	5,942,004	186,440	1,191,364	7,330,314	7,861,037	233,524	1,338,098	9,438,112

POPULATION OF THE UNITED STATES.—CONTINUED.

STATES AND TERRITORIES.	CENSUS OF 1830.					CENSUS OF 1840.					CENSUS OF 1850.				
	White.	Free colored.	Slaves.	Total.	Whites.	Free colored.	Slaves.	Total.	Whites.	Free colored.	Slaves.	Total.	White & under 16.	Ten and under 16.	Foreign & under 16.
Maine,.....	398,303	1,190	9	399,455	398,436	1,255	1	399,733	501,813	1,356	.....	503,169	74,395	71,506	66,291
New Hampshire,.....	203,721	604	3	204,328	204,036	537	1	204,574	317,456	520	.....	317,976	34,318	34,307	32,741
Massachusetts,.....	603,521	7,048	1	610,469	720,030	8,600	5	728,639	985,450	9,064	.....	994,514	101,845	97,103	104,919
Rhode Island,.....	93,621	3,561	17	97,199	105,567	3,238	5	108,805	143,875	3,670	.....	147,545	15,900	14,743	15,306
Connecticut,.....	290,683	8,047	25	298,755	301,856	8,105	17	309,978	383,699	7,662	.....	370,792	38,344	37,907	36,013
Vermont,.....	270,771	861	.....	271,632	301,318	730	.....	302,048	313,402	718	.....	314,130	35,077	36,094	34,258
New York,.....	1,476,770	44,670	9,273	1,530,613	1,776,569	50,627	4	1,827,199	2,048,353	49,069	.....	2,097,394	374,139	357,525	365,743
New Jersey,.....	300,396	37,030	2,225	339,651	343,723	41,744	674	345,467	408,553	53,810	.....	462,363	61,665	57,301	61,360
Pennsylvania,.....	1,309,990	37,030	4,063	1,349,083	1,676,115	47,644	64	1,723,823	2,058,169	53,810	.....	2,112,000	282,938	274,309	282,938
Delaware,.....	57,001	15,855	3,392	76,248	85,561	10,919	2,605	88,180	117,043	74,723	.....	121,768	9,918	8,923	7,769
Maryland,.....	291,108	32,938	102,904	426,950	318,304	62,078	89,737	470,119	417,943	74,723	.....	492,666	54,574	49,915	43,289
Virginia,.....	694,300	47,348	469,757	1,211,405	740,835	49,592	440,057	1,230,484	894,000	54,363	.....	948,363	130,173	117,440	97,633
North Carolina,.....	472,843	10,543	245,601	728,987	484,870	92,322	245,817	723,119	553,098	37,463	.....	590,561	80,300	73,909	61,955
South Carolina,.....	257,863	7,921	315,401	571,185	259,084	8,376	327,038	594,398	574,503	8,960	.....	583,464	83,760	36,974	30,362
Georgia,.....	280,900	2,496	217,531	500,927	407,085	2,753	250,944	660,782	521,578	2,931	.....	524,509	83,760	73,749	58,582
Florida,.....	517,797	4,917	165,213	687,917	500,332	7,217	192,258	699,807	761,413	10,011	.....	771,426	116,919	101,064	84,916
Kentucky,.....	455,553	14,063	651,904	1,121,520	440,627	17,342	153,058	603,027	736,896	6,422	.....	743,318	118,867	104,369	89,604
Tennessee,.....	385,706	9,668	1,200	396,574	426,829	17,342	3	444,174	1,053,054	25,379	.....	1,078,433	287,662	251,738	213,915
Ohio,.....	339,390	9,668	9	349,067	478,683	17,342	3	496,028	1,053,054	25,379	.....	1,078,433	287,662	251,738	213,915
Indiana,.....	270,453	5,919	63,059	339,431	326,621	17,074	1,406	344,096	595,714	11,622	.....	607,336	123,683	133,659	110,673
Illinois,.....	155,061	1,637	6,119	162,817	170,074	3,306	4,094	177,474	375,631	10,959	.....	386,590	49,747	41,201	38,404
Michigan,.....	31,346	381	33	31,760	30,657	3,306	331	33,387	37,941	5,436	.....	43,377	120,905	112,960	92,660
Louisiana,.....	89,441	16,710	109,588	215,739	138,457	707	.....	140,164	305,071	5,436	.....	310,507	50,221	49,531	49,531
Missouri,.....	114,705	569	35,091	150,365	157,458	25,402	1,574	164,435	325,491	17,462	.....	342,953	33,305	27,900	23,116
Alabama,.....	100,406	1,572	117,549	309,527	323,688	335,165	9,039	332,724	592,004	5,618	.....	607,622	90,962	70,962	64,549
Arkansas,.....	35,871	141	30,388	66,390	77,174	465	10,035	87,209	162,189	606	.....	162,795	67,690	50,204	49,763
Florida,.....	18,385	844	15,501	34,730	37,943	185	11	39,045	102,189	606	.....	103,795	96,368	93,108	10,049
Wisconsin,.....	.....	.....	.....	.....	54,477	.....	.....	54,477	304,736	633	.....	305,369	7,458	5,869	4,790
Iowa,.....	.....	.....	.....	.....	30,749	185	11	30,934	304,736	633	.....	305,369	43,197	33,946	28,739
California,.....	.....	.....	.....	.....	154,021	.....	.....	154,021	304,736	633	.....	305,369	43,197	33,946	28,739
Minnesota,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Nebraska,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Montana,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Idaho,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Washington,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Oregon,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Utah,.....	.....	.....	.....	.....	91,638	.....	.....	91,638	304,736	633	.....	305,369	43,197	33,946	28,739
Aggregate,.....	10,537,276	319,569	2,000,043	12,856,888	14,192,605	380,303	2,487,455	17,060,453	19,553,008	434,495	3,304,321	22,191,876	2,704,136	2,402,199	2,192,710

2,704,136
2,402,199
2,192,710

2,704,136
2,402,199
2,192,710

TABLE III.—EDUCATIONAL STATISTICS OF THE UNITED STATES IN 1920.

STATES AND TERRITORIES.	Colleges.				Academies.				Public Schools.				White Persons.			
	Teachers.	Pupils.	Annual Income.		Teachers.	Pupils.	Annual Income.		Teachers.	Pupils.	Annual Income.		Returned as to males, colleges, Academies, and Public Schools.	Males. Returned as to males, colleges, Academies, and Public Schools.	Persons over 15 years who cannot read or write.	Number of native born, who can read or write.
			Estimated.	Actual.			Estimated.	Actual.			Estimated.	Actual.				
Alabama.....	55	597	\$41,255	\$164,105	380	529	\$234,979	1,139	1,195	92,360	\$315,002	300,989	77,927	69,776	33,752	33,453
Alaska.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Arizona.....	14	119	3,100	17,570	136	1,077	24,308	333	335	9,403	43,763	68,411	27,927	29,379	32,110	32,000
California.....	9	5	170	14,370	50	4,077	30,308	333	335	49	3,000	14,700	21,919	969	5,118	9,318
Colorado.....	26	918	94,000	84,040	93	3,233	84,040	93	34	2,169	14,322	14,322	4,780	6,103	1,457	4,249
Connecticut.....	4	56	33,630	53,630	330	3,096	145,997	132,130	1,656	17,767	71,969	521,320	79,003	82,433	4,729	1,993
Delaware.....	9	16	144	17,300	65	94	9,011	47,832	33,498	194	8,970	43,861	11,135	14,316	4,536	9,777
Florida.....	84	1,535	105,430	105,430	318	9,059	108,953	184,649	1,251	1,905	32,705	193,321	43,369	77,015	41,300	41,801
Georgia.....	6	35	442	13,200	12,399	83	40,498	47,678	4,948	185,795	359,712	356,416	130,411	181,908	40,054	33,336
Idaho.....	11	61	1,069	43,350	131	533	62,580	73,219	4,922	4,980	161,560	316,353	108,784	250,624	70,540	69,445
Illinois.....	3	4	100	2,000	12,000	30	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Indiana.....	12	1,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Iowa.....	12	1,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Kansas.....	12	1,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Kentucky.....	12	1,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Louisiana.....	12	1,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Maine.....	9	41	629	65,729	65,729	324	133,077	283,003	664	623	340,679	362,419	31,003	29,536	9,297	15,323
Maryland.....	13	989	14,000	17,784	131	223	6,448	64,966	4,042	5,540	102,815	315,436	109,745	185,941	6,147	9,134
Massachusetts.....	13	989	14,000	17,784	131	223	6,448	64,966	4,042	5,540	102,815	315,436	109,745	185,941	6,147	9,134
Michigan.....	6	85	1,127	113,714	122,403	523	503	10,767	310,177	354,521	3,679	4,443	170,475	1,006,795	1,010,346	100,194
Minnesota.....	3	52	208	14,000	14,000	37	71	1,019	24,947	144,728	762	1,331	110,455	167,896	108,784	112,392
Mississippi.....	11	93	862	42,400	47,652	171	967	6,028	73,717	183,403	1,570	1,038	18,746	254,159	297,891	30,926
Missouri.....	9	65	1,009	79,328	68,277	904	368	8,229	143,171	183,403	1,570	1,038	18,746	254,159	297,891	30,926
New Hampshire.....	7	18	973	11,000	11,000	107	163	2,825	43,302	32,501	2,391	3,013	51,754	106,944	167,908	61,592
New Jersey.....	4	40	470	79,700	79,700	285	453	2,768	300,542	1,473	3,714	75,643	106,944	167,908	61,592	
New York.....	18	174	2,973	146,258	217,267	971	3,180	2,768	300,542	1,473	3,714	75,643	106,944	167,908	61,592	
North Carolina.....	18	174	2,973	146,258	217,267	971	3,180	2,768	300,542	1,473	3,714	75,643	106,944	167,908	61,592	
Ohio.....	26	120	2,921	195,729	195,729	971	3,180	2,768	300,542	1,473	3,714	75,643	106,944	167,908	61,592	
Oklahoma.....	26	120	2,921	195,729	195,729	971	3,180	2,768	300,542	1,473	3,714	75,643	106,944	167,908	61,592	
Pennsylvania.....	22	134	3,590	226,935	318,070	524	914	23,251	301,077	1,081	12,694	413,700	349,249	1,022,949	440,977	488,111
Rhode Island.....	1	383	23,000	23,000	40	75	1,901	32,448	37,423	416	518	33,130	100,481	100,481	28,359	3,349
South Carolina.....	1	43	700	104,700	104,700	262	333	7,467	595,459	724	739	17,838	900,000	900,000	36,085	40,303
Tennessee.....	16	63	1,705	65,307	67,689	964	404	9,928	155,903	175,996	2,680	2,619	104,117	196,518	200,253	115,750
Texas.....	9	7	165	1,000	4,125	97	137	3,269	30,364	79,723	349	360	7,946	44,068	94,554	11,560
Vermont.....	3	30	404	21,558	21,558	118	257	6,864	48,935	56,159	2,731	4,173	93,457	176,111	179,161	100,783
Virginia.....	12	75	1,343	159,700	162,574	547	9,098	224,372	351,097	2,930	2,997	67,353	314,695	314,695	77,764	100,711
Wisconsin.....	8	75	4,700	4,700	1,009	1,403	1,359	95,817	113,133	113,133	113,133	113,133	61,615	90,341	6,361	1,551
Wyoming.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Alaska.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Arizona.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of California.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Colorado.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Connecticut.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Delaware.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Florida.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Georgia.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Idaho.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Illinois.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Indiana.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Iowa.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Kansas.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Kentucky.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Louisiana.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Maine.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Maryland.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Massachusetts.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Michigan.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Minnesota.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Mississippi.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Missouri.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of New Hampshire.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of New Jersey.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of New York.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of North Carolina.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Ohio.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Oklahoma.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Territory of Pennsylvania.....	1	1	1	1	1	1	1	1	1	1	1	1	1			

Total,..... 320 1,078,792 11,064,426 2,142,359 16,085 12,000 383,090 4,644,314 13,851,170 160,376 91,106 1,354,011 11,200,547 9,892,783 13,014,025 4,003,040 1,012,585 538,200

LIBRARIES OF THE UNITED STATES.

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TABLE IV.—PUBLIC LIBRARIES IN THE UNITED STATES IN 1880.

STATES.	State libraries.		Social libraries.		College libraries.		Students' libraries.		Libraries of mechanical and professional schools.		Libraries of scientific and historical societies.		Public school libraries.		Church libraries.		Society school libraries.		Totals for States.	
	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.	No.	Volumes.
Maine,.....	1	9,000	2	6,270	2	16,800	6	13,134	2	10,500	1	300	17	452	9	1,692	131	26,988	171	88,906
New Hampshire,.....	1	4,700	9	13,578	3	6,400	5	16,300	7	10,700	2	2,500	25	2,500	6	2,450	70	50,117	136	78,745
Vermont,.....	1	3,500	1	1,000	3	13,032	6	8,667	1	1,000	1	1,000	13	9,100	3	590	38	10,080	64	44,800
Massachusetts,.....	1	7,400	23	138,969	4	71,603	13	98,735	9	45,450	10	44,378	70	91,330	42	14,787	433	165,470	1,237	993,591
Rhode Island,.....	1	3,000	5	23,104	2	24,000	7	32,000	3	1,000	2	2,000	10	1,000	1	1,000	10	32,785	108	104,569
Connecticut,.....	1	3,000	3	21,500	2	13,000	7	32,000	3	1,000	4	2,000	3	3,000	2	1,000	10	32,785	108	104,569
New York,.....	3	34,000	21	151,504	6	43,376	7	19,319	17	143,465	4	25,625	8,070	1,338,848	6	9,688	177	33,944	8,427	1,293,946
New Jersey,.....	1	5,000	16	125,265	10	37,575	19	99,350	7	28,300	5	38,478	59	8,131	96	26,438	386	59,071	232	373,049
Pennsylvania,.....	1	4,000	1	4,000	1	9,500	9	6,300	3	3,150	1	1,500	22	5,467	5	1,550	18	9,700	17	10,400
Delaware,.....	1	15,000	9	33,156	6	25,592	4	9,800	1	1,000	2	9,173	3	330	1	1,500	84	22,315	135	114,786
Maryland,.....	10	100,300	9	7,000	9	39,500	4	9,800	5	19,051	1	1,300	2	1,460	9	330	11	1,975	43	91,485
District of Columbia,.....	1	14,000	4	3,313	3	45,790	6	10,466	5	10,364	1	1,000	1	1,000	9	1,647	19	9,352	30	25,946
Virginia,.....	1	3,000	2	98,500	3	19,000	4	1,900	5	10,364	1	1,000	1	1,000	1	1,000	15	1,868	14	39,914
North Carolina,.....	1	4,000	1	6,510	1	1,357	4	4,685	2	5,000	1	1,000	1	1,000	1	1,000	15	5,775	50	37,080
South Carolina,.....	2	4,000	1	1,357	3	13,000	9	9,623	1	1,000	1	1,000	102	3,050	1	1,000	6	778	114	10,580
Georgia,.....	1	5,000	1	1,357	3	13,000	9	9,623	1	1,000	1	1,000	102	3,050	1	1,000	6	778	114	10,580
Florida,.....	1	5,000	1	1,357	3	13,000	9	9,623	1	1,000	1	1,000	102	3,050	1	1,000	6	778	114	10,580
Alabama,.....	1	7,000	1	10,000	4	13,000	9	9,623	1	1,000	1	1,000	102	3,050	1	1,000	6	778	114	10,580
Mississippi,.....	1	1,001	1	1,000	1	300	1	300	1	1,000	1	1,000	102	3,050	1	1,000	6	778	114	10,580
Louisiana,.....	1	1,001	1	1,000	1	300	1	300	1	1,000	1	1,000	102	3,050	1	1,000	6	778	114	10,580
Texas,.....	1	8,000	1	1,000	9	30,844	8	9,912	1	3,500	1	1,000	2	5,100	1	1,000	18	2,468	29	40,854
Arkansas,.....	1	9,000	1	3,500	10	37,150	10	7,100	3	4,000	1	1,500	1	1,000	4	1,000	18	2,468	29	40,854
Tennessee,.....	1	12,500	8	21,595	13	35,510	19	30,905	3	12,399	1	1,000	374	47,238	1	975	549	53,910	300	139,519
Kentucky,.....	1	4,000	2	3,315	4	10,300	4	4,500	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Ohio,.....	1	7,000	4	10,700	6	17,300	6	8,128	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Michigan,.....	1	4,000	2	3,315	4	10,300	4	4,500	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Indiana,.....	1	4,000	2	3,315	4	10,300	4	4,500	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Illinois,.....	1	4,000	2	3,315	4	10,300	4	4,500	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Wisconsin,.....	1	4,000	2	3,315	4	10,300	4	4,500	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Iowa,.....	1	4,000	2	3,315	4	10,300	4	4,500	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Minnesota,.....	1	4,000	1	1,000	1	1,000	1	1,000	1	1,000	1	1,000	10	9,500	1	400	18	3,500	396	68,735
Total,.....	30	298,937	126	611,334	196	596,912	145	554,639	227	350,006	34	128,001	9,205	1,539,233	130	58,350	1,986	549,331	12,317	4,334,465

STATISTICS OF THE NATIONS.

Number of Public Libraries in the different States and Capitals of Christendom in 1848.

COUNTRIES.	Total No. of Libraries.	No. of Vols. of Printed Books.	No. of Vols. of Manuscript.	PRINCIPAL LIBRARIES OF EUROPE.	Number of Volumes.
Great Britain	34	1,771,493	62,149	Paris, National Library ..	824,000
France	186	4,510,295	119,119	Munich, Royal Library ..	600,000
Prussia	53	2,040,450	15,417	Petersburg, Imperial Lib...	446,000
Russia	12	852,090	21,604	London, Brit. Museum Lib.	435,000
Austria	49	2,408,000	41,103	Copenhagen, Royal Library.	412,000
Anhalt	2	25,700	—	Berlin, Royal Library	410,000
Baden	5	404,300	3,170	Vienna, Imperial Library..	313,000
Bavaria	18	1,268,500	30,156	Dresden, Royal Library ..	300,000
Belgium	14	509,100	20,728	Madrid, National Library..	200,000
Bremen	2	36,000	—	Wolfenbuttel, Ducal Lib...	200,000
Brunswick	6	223,000	4,580	Stutgard, Royal Library ..	187,000
Cracow	2	52,000	2,210	Paris, Arsenal Library	180,000
Denmark	5	647,000	3,200	Milan, Brera	175,000
Frankfort-on-the-Maine	1	62,000	550	Paris, St. Geneviève	150,000
Hamburg	6	200,367	5,000	Darmstadt, Grand Ducal ..	150,000
Hanover	5	492,000	5,743	Florence, Magliabecchian ..	150,000
Hesse	5	273,200	400	Naples, Royal	150,000
Hesse-Darmstadt	3	282,600	5,268	Brussels, Royal	138,500
Hildburghausen	1	12,000	—	Rome, Casanate	120,000
Holland	7	228,310	12,000	Hague, Royal	100,000
Lippe-Detmold	1	21,500	100	Paris, Mazarin	100,000
Lubec	2	52,000	400	Rome, Vatican	100,000
Luca	1	25,000	—	Parma, Ducal	100,000
Luxemburg	1	19,600	163	UNIVERSITY LIBRARIES.	
Mecklenburg	3	85,400	—	Gottingen, University Lib..	360,000
Mecklenburg-Strelitz..	1	50,000	—	Breslau, University Library	250,000
Modena	1	90,000	3,000	Oxford, Bodleian Library..	220,000
Naples and Sicily	8	413,000	3,000	Tubingen, University Lib..	200,000
Nassau	1	50,000	—	Munich, University Library	200,000
Oldenburg	1	60,000	—	Heidelberg, University Lib.	200,000
Papal States	16	957,000	33,495	Cambridge, Public Library.	166,724
Parma	3	146,000	—	Bologna, University Library	150,000
Portugal	7	276,000	7,587	Prague, University Library	130,000
Reuss	1	5,000	—	Vienna, University Library	115,000
Rudolstadt	1	46,000	—	Leipsic, University Library	112,000
Sardinia and Piedmont.	11	297,000	4,500	Copenhagen, University Lib.	110,000
Saxe-Coburg-Gotha ..	5	247,000	5,000	Turin, University Library...	110,000
Saxe-Meiningen	1	32,000	—	Louvain, University Library	105,000
Saxe-Weimer	2	180,000	2,000	Dublin, Trinity College Lib.	104,239
Saxony	9	570,500	7,950	Upsal, University Library..	100,000
Spain	27	711,050	8,262	Erlangen, University Lib..	100,000
Sweden and Norway ..	8	353,000	9,300	Edinburgh, University Lib.	90,854
Switzerland	13	480,300	12,734	Public Libraries in Paris ...	
Tuscany	10	401,000	30,000	" in London	
Waldeck Pyrmont	1	30,000	—	" in St. Petersburg	
Wurtemberg	6	433,000	5,200		

The number of volumes of printed books in the Libraries of 118 Colleges in the United States, in 1850, was 965,831.

TABLE VI. SCHOOL FUNDS AND INSTITUTIONS OF EDUCATION,

SUPPORTED PARTLY OR WHOLLY BY PUBLIC FUNDS.

The statistics are made up for 1854, as nearly as possible for all the States, although in some those for 1855 were accessible. We have drawn freely, by permission, from the American Almanac for 1856, and Colton's American Statistical Annual for 1854, and from official Reports.

ALABAMA.

EDUCATIONAL FUNDS. These consist of a *University Fund* borrowed by the State to the amount of \$250,000, the annual interest of which, together with an additional sum enough to make up \$30,000, is paid over to the Trustees of the State University, at Tuscaloosa. The *Common School Fund* consists of the following sums, according to the Report of the Superintendent of Education, in 1855:

Sixteenth Section Fund on deposit in the State Treasury, December, 1854,	Principal	Interest
Value less Sixteenth Section Fund—sold in 1853,	\$1,244,793	\$74,687
United States' Deposit Fund,	97,091	7,767
Direct appropriation in 1854,	669,086	53,526
Special Taxes,		100,000
Escheated Property,		1,300
Notes, the interest of which is paid directly to Towns,	300,000	223
	\$2,300,970	\$237,515

The full amount of the Common School Fund managed by the State is not yet realized. Besides the State Common School Fund there are Township School Funds, the amount or income of which are not reported to the State Treasurer. This State has received 902,774 acres of land for Common Schools, and 23,040 acres for a University.

COMMON SCHOOL SYSTEM. In 1854, the Legislature provided for the appointment of a Superintendent of Common Schools, as preliminary to a thorough revision of the system. According to the returns made to him in 1855, there were 145,518 children between the ages of 5 and 18 years, and about 1000 schools in operation.

SCHOOL FOR DEAF AND DUMB. This institution was established in 1853, at Robinson's Springs, Autauga County, eleven miles north-west of Montgomery. It is free to all deaf-mutes of the State in indigent circumstances between the ages of eight and twenty years. Amount appropriated for its support in 1854 was \$5,000.

ARKANSAS.

EDUCATIONAL FUNDS. There is a *Common School Fund* in each township, arising out of the Sixteenth Section leases of Salt Springs, and the sale of estrays; but the aggregate value of the Fund or its annual income is not known. The *Seminary Fund*, consisting of a grant by Congress of seventeen sections of land, has been distributed among the counties. The State received 886,460 acres of land for Common Schools, and 46,080 acres for a University.

COMMON SCHOOL SYSTEM. The Secretary of State is *ex officio* State Commissioner of Common Schools. His last report is dated 18th November, 1854. The returns to him from the school commissioners are exceedingly imperfect. Only 40 schools are reported in the whole State. The sale of the school lands would make a large fund. The Commissioner says, "The great obstacle in the organization of common schools is not so much a deficiency in the means to sustain them," as it is "the indifference that pervades the public mind on the subject of education."

CALIFORNIA.

EDUCATIONAL FUNDS. By grants of Congress, the State of California is possessed of over seven millions of acres of public lands inviolably devoted by the Constitution to educational purposes. The funds realized from sales now amount to over \$500,000.

COMMON SCHOOL SYSTEM. The Constitution provides for the election of a Superintendent of Public Instruction to hold office for three years. The Legislature has established a Board of Education for the State consisting of the Governor, the Superintendent of Public Instruction, and the Surveyor General; the Governor being the President, and the Superintendent of Public Instruction being the Secretary thereof. Each town, &c., elects three persons as commissioners of schools for the town, and a constable as a common school marshal. Provision is also made for County Superintendents.

The number of public schools in actual operation in 1855 was 221, with 304 teachers, and 25,398 pupils.

Three Colleges have been incorporated, and several academic institutions have been organized in different parts of the State.

CONNECTICUT.

EDUCATIONAL FUNDS. This State has several funds appropriated to common school purposes. The *School Fund*, derived from the sale of that portion of the territory of Ohio, known as the Western Reserve, because it was reserved by the State, in its deed of cession, dated Sept. 30, 1786, by which it conveyed to the general government for the general benefit of all the people, all its claims to that vast unappropriated domain which was originally included by its charter within the limits of Connecticut. This reservation was sold for \$1,200,000, which was constituted a fund, the income of which was appropriated to the support of common schools. By judicious management, this fund has divided among the schools since 1801, over \$4,000,000 of interest, paid the expenses of its management, and has now (1855) a capital of \$2,049,953, and yields an annual dividend of \$144,173. The *United States' Town Deposit Fund*, one-half of the annual income of which is appropriated to common schools, amounts to \$763,661, and yields to their support \$26,000. *Society and Town School Funds* amount to about \$100,000, yielding about \$6,000 a year. The aggregate amount of these funds is now (1855) increased by a Town Tax of one per cent., yielding about \$60,000, and local District Taxes yielding about \$30,000, making the annual resources of the common schools about \$255,000.

SYSTEM OF COMMON SCHOOLS. The law provides for the appointment of a Superintendent of Common Schools, who is *ex officio* Principal of the State Normal School. The following statistics are gathered from the report of this officer for 1853, which are fuller than for any subsequent year. Number of towns for year ending March 31, 1852, 148; of school societies, 217; of school districts, 1,642; of children between four and sixteen, 96,382; attending school in winter, 74,100; average attendance 65,100. Winter schools were kept in 1,530 districts. Number of teachers in winter, male, 1,060, female, 730. Summer schools were kept in 1,410 districts. Number of teachers, in summer, male, 670, female, 1,020. There were in the winter 403 private schools of all grades, with 8,100 scholars. Average monthly compensation of teachers in winter, exclusive of board, males, \$18.50, females, \$8.20; in summer, males, \$22, females, \$7.50. Of the teachers, 220 had at least 10 years' experience; 430, 5 years'; 500, 3 years'; 570 less than one year's. 45 schools were broken up from the incompetency of the teachers. \$73,000 were expended in building and repairing school-houses during the year. The amount of dividends from the school fund for the year was

\$143,693.69; which gives \$1.35 to every enumerated child. Lecturers are employed to visit the districts, and to lecture upon topics calculated to improve parents, teachers and scholars; and Teachers' Institutes have been held with marked success in the several counties in the State, at which 656 members were in attendance.

STATE NORMAL SCHOOL. This Institution is at New Britain, and has John D. Philbrick, the Superintendent of Schools, for its Principal, and David N. Camp, Associate Principal. It was opened for scholars May 15, 1850, and from that time to March 27, 1855, 867 pupils were connected with it. During the last year, 294 pupils have been in attendance. The number is limited to 220 at any one term; selections to be, one from each school society. Tuition free.

STATE REFORM SCHOOL, AT WEST MERIDEN. Dr. Hawley is Superintendent. The buildings of this Institution were so far completed, that it was opened for the reception of pupils March 1, 1854. From that time to April 1 of the same year, 15 boys were received. During the year ending April 1, 1855, 135 were received, and 11 discharged, escaped, or died, leaving in the school April 1, 1855, 139. Of the 150 committed, 54 were for theft, 7 for burglary, 41 for vagrancy, and 35 for stubbornness. 89 were committed during minority; 17 for two years, 11 for three years, 4 for five years, 3 for six years; 25 were born abroad, 125 were natives of the United States. The average age of the boys when committed was nearly 12.33 years. Records are kept, and the standard of each boy is determined by his daily conduct. The school is divided into four grades, and each grade into four classes. The discipline is maintained by promotion, or degrading, by withholding food, confinement, and if necessity requires it, by corporal punishment. The time is allotted, school, 4½ hours; work at some mechanical employment or on the farm, 6 hours; meals and play, 3½ hours; the rest in sleep. There has already been gathered a library of 700 volumes. The buildings, when completed, are intended to accommodate from 300 to 350 pupils. The farm has 161½ acres of land. The current expenses of the year for 200 pupils are nearly \$17,000.

THE BLIND. The Legislature provides for the instruction of the indigent blind children of the State, in the New England Institute for the Blind, at South Boston, at an average annual expense of \$1,200.

THE DEAF AND DUMB. The Legislature appropriates a sum to educate its indigent deaf-mute children at the American Asylum for the Deaf and Dumb, at Hartford. The average annual expense is about \$2,000.

AMERICAN ASYLUM FOR THE DEAF AND DUMB, AT HARTFORD. Rev. William W. Turner, A. M., Principal. The number of pupils for the year ending May 12, 1855, was 217; of whom 117 were males, and 100 females. Of these, 28 were supported by friends, 37 by the State of Maine, 18 by New Hampshire, 18 by Vermont, 75 by Massachusetts, 5 by Rhode Island, and 36 by Connecticut. The cost for each pupil, for board, washing, fuel, tuition, and the incidental expenses of the school-room, is \$100 per annum. This Institution received a grant of 23,000 acres of land from Congress, out of which, by judicious management, a productive fund of over \$221,000 has been realized, the income of which reduces the cost of tuition to pupils from all parts of the country.

DELAWARE.

EDUCATIONAL FUNDS. The State has a permanent School Fund of \$435,505, which yielded in 1854, the sum of \$33,329—and which was increased by a tax levied on the several districts of \$24,000.

FREE SCHOOLS. The system provides a free school within reach of every

family. The districts are laid off, numbered and incorporated. 236 of them are organized. Each district entitles itself to a portion of the fund by establishing a school, and contributing toward its support not less than \$35. But any district may lay a tax on itself of \$800; or (by a special vote) may increase it to any sum deemed necessary for school purposes. Towns or populous districts may unite their resources and form schools of higher grades; the only condition is that they shall be free. The number of free schools in operation in the State was 236; number of scholars, (in a white population of 71,169,) 10,280; receipts from school fund and contributions, \$57,738.95; expended for support of free schools, \$49,469.80.

DEAF MUTES AND BLIND. The State makes provision for the education of its indigent deaf mutes and blind children, at the Philadelphia Institutions, at a cost of \$1,500.

FLORIDA.

EDUCATIONAL FUNDS. By acts of Congress 908,503 acres of land have been appropriated for common schools, and 46,080, for a University. By an act of the Legislature of 1849, the proceeds of the sales of the school lands, or sixteenth section, and five per centum of the net proceeds of other lands granted by Congress for purposes of education, of all escheated property, and all salvages, shall constitute a School Fund for the support of common schools in the State. We have no information as to the present amount of this Fund, or of the Schools.

GEORGIA.

EDUCATIONAL FUNDS. The State appropriated in 1783, one thousand acres of land to each county, and in 1817 \$250,000, for free schools; and in 1792, one thousand pounds were appropriated for the endowment of an academy in each county, which was increased in 1817 by the further grant of \$250,000. The former is designated as the free school fund, and the latter the academic fund. The University of Georgia was originally endowed in 1784, by a grant of 40,000 acres of land, not all of which became available. The University has realized about \$130,000 out of the grant.

COMMON SCHOOLS. The avails of the free School Fund (\$33,000) are paid out to teachers in each county in favor of certain scholars who are reported by the magistrates as proper recipients of it on account of poverty. The number thus aided in 1854 was 20,000.

DEAF AND DUMB. An Asylum for deaf mutes is located at Cave Springs, to which the State makes an annual appropriation of \$8,000.

BLIND. An Institution for the Blind has been recently established.

IOWA.

EDUCATIONAL FUNDS. Congress has appropriated 905,144 acres of land for common schools, and 46,080 acres for a University. The proceeds of the sale of the former amounted in December, 1854, to nearly \$1,000,000, and were loaned at 10 per cent. interest. The sale of University lands amounted to \$58,571, and will ultimately reach 200,000.

COMMON SCHOOLS. The Constitution provides for the election of a Superintendent of Public Instruction by the people; constitutes all grants of land by Congress for schools to be a perpetual fund for that purpose, and appropriates all exemptions from military duty, and all fines, to the support of schools and school libraries. The law also provides for three Normal Schools.

For 1854, there were reported 2,353 organized school districts; in which were 111,098 persons between the ages of 5 and 21; 1,520 district schools; 44,115 pupils

in schools; 961 male teachers, 772 female; wages per month, males, \$19.61, females, \$9.39; number of days school taught, 104,981; volumes in libraries, 676; number of school-houses, brick 98, stone 9, frame 597; cost of school-houses, \$170,566; amount raised in districts by tax for school-houses, \$30,224.07; contingencies, \$3,624.51.

DEAF AND DUMB. An Asylum was established at Iowa City in 1854; the State appropriates \$5,000 a year for its support. There were 20 pupils in 1866.

BLEND. An Institution was opened in 1853, which numbered in 1864, 23 pupils. The State contributed \$2,000 toward their support.

ILLINOIS.

EDUCATIONAL FUNDS. The amount of land granted by Congress for common schools is 650,317 acres, and for an University or higher Seminary, 24,040 acres. The Fund, realized out of these grants, was as follows in 1863.

State School Fund,	\$951,504,	yielding	\$56,888
County Fund,	50,000,	"	5,000
Township Fund,	2,371,692,	"	237,169

The State School Fund is made up of the avails of the public lands other than the 16th section] amounting to \$468,490, and the surplus revenue of the United States, amounting to 325,592; the College Fund amounting to \$92,682, and the Seminary Fund amounting to \$59,738.

COMMON SCHOOLS. In the seventy-nine counties that made returns for 1864, there were 4,125 organized districts. Amount of public money paid for teachers' wages, \$145,182.07; amount paid, besides public money, \$157,915.01; whole amount expended for schools in these counties, \$308,365.52. Number of schools, 4,215; taught by males, 2,492; by females, 1,557; children taught, 136,371; average length of schools is six months; average monthly wages of male teachers \$25; of females \$12.

INSTITUTION FOR THE DEAF AND DUMB, JACKSONVILLE. The edifice for this Institution was erected in 1852-53 at an expense of \$40,000, sufficiently large to accommodate all the deaf mutes of the State. The number of pupils during the term was 109, of whom 94 were from Illinois. The annual expenses of the Institution are about \$19,000.

INSTITUTION FOR THE EDUCATION OF THE BLIND. This Institution was opened in 1853, at an expense of \$40,000. Instruction free to all the blind of the State. Annual expense is \$5,000. Number of pupils, 30.

INDIANA.

EDUCATIONAL FUNDS. Congress has appropriated 650,317 acres of land to common Schools, and 23,040 to a University. According to the report of the Superintendent [W. C. Larrabee] for 1864, the funds at present available for school purposes are of the following species and amounts: congressional township fund, \$1,607,819.18; surplus revenue fund, \$552,529.92; Saline fund, \$61,270.05; bank tax fund, 56,769.04; total, \$2,278,588.14. This amount is, or ought to be bearing interest at seven per cent., producing annually \$159,501.17. Deducting from this the amount allowed, two and a half per cent., to county auditors and treasurers for services, we have \$143,551.06 to be annually distributed to the cities, towns, and townships of the State, in proportion to the number of children in each. The estimated whole number of children in the State, between the ages of 5 and 21 years, is 414,084; thus affording only 86 cents to each child, and taxation is therefore indispensably necessary to accomplish anything in the cause of education.

Unproductive School Funds. The most important part of the common school

fund determinable in amount, but unavailable at present for distribution, is that derived from the sinking fund, which was created by the 113th section of the act establishing the State Bank of Indiana. The total amount of school fund from this source will amount in 1857 to \$1,560,400.

Prospective School Funds. The principal of these are—county seminary fund, about \$100,000; unsold school lands, at least \$50,000; and swamp lands, valued at \$1,000,000. There are also several incidental sources of School Fund.

The grand total of the entire School Fund may, therefore, be thus stated: productive, \$2,278,588; unproductive, \$1,560,400; prospective, \$1,150,000—total, \$4,988,988."

COMMON SCHOOLS. By an act of 1855, a State Board of Education is established consisting of the Governor, Secretary of State, State Treasurer and Auditor, the Attorney General, and the Superintendent of Public Instruction, who meet annually for conference, discussion, and the determination of questions arising under the school law. The Superintendent is elected by the people for two years, and has the general oversight of the schools, and must spend at least one day a year in each county. The Board of Trustees of each township have the general custody and management of the school property and lands, a limited power to lay taxes for building school-houses, and the authority to employ teachers when the inhabitants do not designate them. They also each year enumerate the children in their township between the ages of 5 and 21. The inhabitants of each school-district elect for a year a school director, who takes care of the school-house, provides fuel, &c., and reports to the trustees. There is to be assessed each year the sum of ten cents on each \$100 worth of property, and fifty cents on each poll, (except upon the property and polls of negroes and mulattoes, who have none of the benefits of this act,) for the use of common schools; and one quarter of a mill on each dollar and twenty-five cents on each poll (the poll tax to last but one year) for the purchase of township libraries, such libraries to be purchased under the direction of the State Board of Education.

The number of townships in the State is 938; of corporate towns and cities, 95. The number of polls is 171,786. The number of children reported between 5 and 21 years, 445,761; number of teachers reported,—males, 2,432, females 666; in all, 3,098. Teacher's wages per month,—male, \$23.01; female, \$15.62. Number of schools reported 2,622; average length, in months, 2.54. A State teachers' association was formed during the year. 690 school-libraries of 321 volumes each, were distributed throughout the State. The aggregate cost of these 221,490 volumes was \$147,222, or an average of \$213 for each library.

ASYLUM FOR THE DEAF AND DUMB, INDIANAPOLIS, 1854. The Constitution provides that "institutions for the instruction of the deaf, dumb and blind, and for the treatment of the insane, shall be supported by law. Houses of Refuge for the reformation of juvenile offenders shall be established by the Assembly, and the county boards may provide farms as an asylum for those who have claims upon the sympathies and aid of society." All the deaf and dumb of the State between the ages of ten and thirty are entitled to an education, without charge for board or tuition. The session is annual, and lasts ten months, from the 15th of September to the 15th July. The course of instruction is for five years. Pupils in attendance November 1, 1854, 139; 89 males, 50 females. The whole number admitted since the opening of the Hospital in 1843 is 813; 199 males, 114 females. Number discharged, 174; 110 males and 64 females. Of 168 the deafness was congenital. Of 20 the parents married within the degrees of consanguinity; 27 of the pupils have married deaf mutes; 5 those who can hear and speak. 299 were from Indiana. The entire receipts during the year were

\$32,651.21. The expenses were \$32,321.21. Balance, \$330.00. The ordinary expenses of the Institution are \$20,000.

INSTITUTION FOR THE BLIND, INDIANAPOLIS. The boarding and tuition of pupils who are children of residents in the State are free. General applicants over 21 and under 8 years of age are not admitted. The whole number of pupils during the year was 77. 10 left during the year, leaving in the school November 1, 1854, 67. It is estimated that there are 150 blind persons in the State needing the instruction of the school. The current expenses of the school for the year are about \$6,000.

KENTUCKY.

EDUCATIONAL FUNDS. The school fund amounted in 1854 to \$1,400,270.01; consisting of State bonds and bank stocks, besides an annual tax on property amounting to about \$78,000.

COMMON SCHOOLS. 108 counties and cities have made reports to the Superintendent for the year 1854. Number of children reported, 207,210; average number at school, 76,429. Money distributed during the year 1854, \$146,047. Number of children in the State between the ages of 5 and 16 years, 227,123.

INSTITUTION FOR THE BLIND, LOUISVILLE. This Institution was founded in 1842. It has 38 pupils.

INSTITUTION FOR THE DEAF AND DUMB, AT DANVILLE. This school was founded in 1822, and received a grant of a township of land from Congress. It is under the direction of Centre College. It has 87 pupils.

LOUISIANA.

EDUCATIONAL FUNDS. The State has received 786,044 acres of land, for common-school purposes, and 46,080 for a higher seminary. The constitution provides that "free public schools shall be established throughout the State; the proceeds of lands granted for the purpose, and of lands escheated to the State, shall be held as a permanent fund, on which six per cent. interest shall be paid by the State for the support of these schools." The yearly sum of \$250,000 is appropriated for the support of the free schools of the State, and is derived from the levy of a tax of one mill on the dollar, and from the imposition of a poll-tax of \$1 on each white male inhabitant of the State. The School Fund, January 1, 1855, amounted to \$461,269.65. There is, besides, the Seminary Fund, which, at the same date, was \$151,539.66. But these now are funds of account only, and consist merely of a debt of the State to the fund. The number of school districts in the State, January 1, 1855, was 681; number of schools in operation, an average of eight months in the year, in 38 parishes, 687, and the average tuition of each scholar, per annum, was \$9; number of white children in the State, between 6 and 16, 62,682; average attendance for the year, estimated 36,000; number of teachers in the State, about 1,000. The amount apportioned to the several parishes for the year was \$250,524.56. The report of the Superintendent of Public Education contains no other statistics than these of any general use. The Governor in his message speaks of the "educational system" as in an unsatisfactory condition, and as "almost a failure."

DEAF AND DUMB AND BLIND ASYLUM. This Institution is at Baton Rouge, and embraces both a "mute department" and a "blind department." The buildings for the latter were in process of erection at the date of the last report, January 26, 1855. The mute department is in operation. There have been 81 pupils in the Institution during the year, 15 females and 16 males; 29 were natives of Louisiana, and 2 of Kentucky. All the deaf and dumb of the State, between 10 and 30 years of age, and all the blind between the ages of 8 and 25, are entitled to an education, free of charge for board or tuition, in this Institution.

MAINE.

EDUCATIONAL FUNDS. The permanent School Fund is \$125,281.01. The amount apportioned for the year 1854, was \$55,360.53. The bank tax for the support of schools is one-half of one per cent. on their capital. The apportionment is made ratably among towns making returns. Towns are obliged by law to raise annually an amount of school money equal to 40 cents for each inhabitant.

COMMON SCHOOLS. By the act of April 17, 1854, provision is made for the appointment of a Superintendent of Common Schools. His duty is "to devote his time to the improvement of common schools and the promotion of the general interests of education in the State." He is to hold annually in each county a teachers' convention, for one week at least, of which he has the charge, and he is to employ suitable instructors and teachers to assist him therein. To defray the expenses of these conventions \$2,000 are appropriated annually.

The latest statistics of the common schools are contained in the Report of the Secretary of the Board of Education for 1852, as follows: Number of cities 7, of towns 372, and plantations 841; of districts 4,092, and parts of districts 275. Number of male teachers, 2,767; average monthly wages, \$17.83; female teachers, 4,248; average weekly wages, \$1.54. Average length of schools, 18 3-10th weeks. Number of schools suspended by incompetency of teachers 1,596. School-houses—number of good houses, 1,596; poor do., 2,171; built during past year, 174, and cost, \$67,683.46. Scholars—whole number 237,773; attending summer term—total 133,062, and average, 99,248; attending winter term—total, 164,968, and average 118,746; mean average attendance both summer and winter terms, 108,997; ratio of mean average to whole number of scholars, 0.46. Amount of school money raised by tax per scholar, \$1.20; whole amount of school money raised by tax, \$284,704.74; minimum school tax required by law, 280,543.20; excess \$56,554.44; amount apportioned from State School Fund, \$34,701.81; miscellaneous funds, \$13,378.19; amount expended for private schools \$38,994.42. Ratio of school money raised by tax to valuation of 2 9-10th mills.

STATE REFORM SCHOOL. This school is at Cape Elizabeth, and is under the Superintendence of Wm. R. Lincoln. The first boy was received November 14, 1853; from that day to Nov. 13, 1854, 117 inmates were received and 4 were discharged. 27 were from Kennebec county; 30 from Cumberland; 23 from Penobscot; 2 from Oxford; 1 each from Hancock and Waldo; 12 from York; 3 each from Washington and Franklin; 8 from Sagadahoc; and 2 from Somerset. 78 were committed for larceny; 3 for breaking and entering with felonious intent; 21 as common runaways; 4 for truancy; 8 for assault, and 5 for malicious mischief; 100 were Americans, and 17 foreigners; average age 13½ years. Each boy is employed six hours of each day at some mechanical, agricultural, or domestic labor. The farm connected with the school contains 160 acres.

MARYLAND.

EDUCATIONAL FUNDS. The State has a School Fund, arising out of advances made on account of the war of 1812, and repaid by Congress, together with the avails of a tax on the capital of every bank created by the Legislature. This Fund in 1854 amounted to about \$160,000. The income is distributed to the several counties, and by the county commissioner is paid over in some cases to primary Schools, and in others to one or more Academies.

COMMON SCHOOLS. There is no uniform system of public schools; each county being left at liberty to adopt its own system, in consequence of which there is the most gross inequality of school privileges, and an entire absence of reliable returns as to the condition of such schools as are established. The public schools

of Baltimore are in a good condition. The City raises more money for their support than all the rest of the State for the same object.

The State provides for indigent deaf-mute and blind children in the Institution at Pennsylvania. There is a House of Refuge for young criminals, at Baltimore.

MASSACHUSETTS.

EDUCATIONAL FUNDS. The School Fund amounted on the 1st of January, 1855, to \$1,602,957, yielding an income for distribution among the schools of \$47,000. Any town to draw its proportion of this income must raise by tax on the property of the town for the support of the school a sum equal to \$1.50 per each person between the ages of 6 and 16.

PUBLIC SCHOOLS. Every town is obliged by law to maintain a sufficient number of public schools to educate all the children of a proper school age. And towns having over three hundred families, must maintain a public High or Grammar School. The State provides for the support of four Normal Schools for the education of teachers for the district schools, and has established forty-eight scholarships in the Colleges of the State for the education of teachers in the high schools. The supervision of the public school system is entrusted to a Board of Education, which consists of the Governor and Lieutenant Governor, and eight members, one being appointed each year to serve for eight years. The Board appoints a Secretary, who has an assistant, and two agents to visit schools, lecture in the towns, and co-operate with committees and teachers in the improvement of the schools.

The statistics of the public schools, normal schools, and academies for 1854 were as follows: the towns raise by taxation for the support of schools, \$1,013,472.26. Aggregate expended for wages, fuel, and superintendence \$1,140,132.68. Number of children in the State from 5 to 16 years old, 206,625. Number that attend school under 5 years, 16,093; over 16 years, 21,609. Number of public schools in the State, 4,163. Number of teachers in summer, males 374, females 4,172; in winter, males 1,840, females 2,891. Number of scholars in summer schools, 186,628. Number in winter schools, 199,447. Average attendance in summer, 141,226; in winter, 154,277. Ratio of attendance to whole number of children between 5 and 16, .72. Average length of the schools, 7 months and 16 days. Average wages per month, inclusive of board, paid to male teachers, \$37.76. Do. to female teachers, \$15.88. There are 66 incorporated academies in the State, with an average of 4,142 pupils, and an aggregate of \$85,822.90 paid for tuition; also, 674 unincorporated academies, private schools, &c., with 17,322 scholars, and an estimated aggregate of \$244,290.72 paid for tuition. Amount expended on public and private schools, &c., exclusive of cost of repairing and erecting school edifices, \$1,384,423.40. There were in 1850 local funds for the support of academies, &c., to the amount of about \$50,000, yielding an income of about \$20,000. The value of the public school-houses in the State in 1848 was \$2,750,000, of which \$2,200,000 had been expended since 1838. The four Normal Schools supported by the State, cost annually about \$11,000; one is at Westfield, one at Framingham, one at Bridgewater, and one at Salem, for girls—averaging annually, in all, about 260 pupils.

STATE REFORM SCHOOL FOR BOYS, WESTBOROUGH. This school was established in 1848, at an expense for land and buildings of \$100,000, to which Theodore Lyman gave \$50,000. Boys in the school, Dec. 1st, 1853, 335; received since, 989; discharged during the year, 215; remaining, November 30th, 1854, 559. Of those committed, 3 were 6 years old, 9 were 7, 36 were 8, 67 were 9, 128 were 10, 151 were 11, 179 were 12, 193 were 13, 236 were 14, and 263 were 15, 87 were 16, 19 were 17 and over, and the ages of 8 were unknown. 454 were committed for larceny, 566 for stubbornness, 57 as idle and disorderly, 51 for va-

grancy, 27 for shopbreaking and stealing, 5 for assault, 18 as runaways, 56 for shopbreaking with intent to steal, 5 as common drunkards, 80 for malicious mischief, and 8 for burglary. 990 were committed during minority, 2 for 10 years, 1 for 9 years, 7 for 8 years, 27 for 5 years, and the remainder for shorter periods. Of the whole number of inmates 1,093 were born in the United States, and 236 in foreign countries. Of the 1,093 born in this country, 758 are of American parentage, and the rest of foreign. All the boys are employed during a portion of the day at some mechanical, agricultural, or domestic labor. They do the washing, ironing, and cooking, and make and mend their own clothes. Each day, 4 hours are devoted to school, 6 to labor, 8½ to sleep, and 5½ to recreation and miscellaneous duties. 180 acres of land were originally purchased, and since that time an adjoining farm has been added. A new wing was added to the building in 1853. The school can accommodate 650 inmates, and is now (1855) full. The expenses of the Institution for the year were \$58,171.01; exceeding the means provided, \$8,739.50. The estimated expense of keeping each boy per annum is \$45.

STATE REFORM SCHOOL FOR GIRLS, LANCASTER. A school for this purpose was established by the Legislature of 1855, in pursuance of the recommendation of the commissioners appointed for that purpose by the preceding Legislature. The government is vested in seven trustees, who are authorized to procure a site, and to erect the necessary buildings, at an expense not exceeding \$40,800; that being the amount of the State appropriation (\$20,000) and the private subscription (\$20,800.) Girls over 7 and under 16 years of age, who have committed any offence, or are beggars or vagrants, may be sent thither, and in all cases they are to be committed until they are 18 years of age, unless sooner discharged or disposed of by being bound as apprentices.

SCHOOL FOR IDIOTIC AND FEEBLE-MINDED YOUTH, BOSTON. This school has been in operation since 1848, under the gratuitous and effective superintendence of Dr. Samuel G. Howe. To the close of 1854, 114 pupils had been admitted, and 41 remained in the Institution at that time. 30 are State beneficiaries. At first the State appropriated \$2,500 yearly to support its beneficiaries, and latterly \$5,000 a year. The Legislature at its last session appropriated \$25,000 to purchase a site and erect a building for this school, upon condition that before July 4th, 1855, the trustees should raise \$5,000 for furnishing it with apparatus, &c. This condition has been complied with. From the very able and careful report of the commissioners of the State to ascertain the number and condition of the insane and idiots in the State, prepared by Dr. Jarvis, it appears that there are in the State 1,067 idiots, of whom 640 are supported by friends, and 417 by the State; 1,043 being natives, and 44 foreigners. There has been since 1848 a private establishment for the instruction of this class at Barre, in Worcester Co. It is now under the care of Dr. George Brown, and has some 10 pupils.

PERKINS' INSTITUTION, AND NEW ENGLAND ASYLUM FOR THE BLIND, AT SOUTH BOSTON. From the Twenty-third Annual Report of the Trustees, there were 111 pupils in 1854. The annual expenses are borne by payments made by the States from which the pupils are sent, viz., \$3,000 by Mass.; \$2,408 by Maine; \$1,119 by Conn.; \$640 by Vt.; \$450 by N. Hampshire, and \$225 by private pupils, and the avails of a Fund of \$62,825 belonging to the Institution.

DEAF AND DUMB. The State provides for the education of all her indigent deaf and dumb children, at the American Asylum, at Hartford, at an expense of about \$10,000 a year.

(To be continued.)

XVI. EDUCATIONAL MOVEMENTS AND STATISTICS.

RUSSIA.

UNIVERSITIES. The following particulars are from the last report of the Minister of Public Instruction in Russia.

THE UNIVERSITY OF ST. PETERSBURG includes three faculties,* each divided into two sections, viz., the faculty of history and philology, composed of the sections of universal and oriental literature; the faculty of physics and mathematics, comprising the sections of mathematics and natural sciences; the faculty of law, including the sections of jurisprudence and political economy.

The university had during the year 1853, 70 officers and 383 students. In addition to the latter, 70 foreigners were also in attendance upon the lectures.

The Library of the University† contains 25,322 works in 44,457 volumes, and that of the students contains 1,701 volumes.

THE UNIVERSITY OF MOSCOW contains four faculties; one of history and philology, another of physics and mathematics, the third of law and the fourth of medicine. These four faculties embrace 123 professors and officers and 975 students, in addition to 131 foreigners. The Library of the University contains 68,832 works in 106,096 volumes.

THE UNIVERSITY OF KHARKOFF has four faculties, corresponding to those of Moscow. The number of students in 1853, was 475, beside 18 foreigners; the number of professors and officers was 77. The Library contains 29,541 works in 54,621 volumes.

THE UNIVERSITY OF KASAN, with the same arrangement of its faculties as at Kharkoff, had in 1853, 92 officers and 370 students. The principal Library contains 52,487 volumes, and that of the students, 10,181 volumes.

THE UNIVERSITY OF ST. VLADIMIR, AT KIEFF, is formed also of the four above-named faculties. It had in 1853, 97 professors and officers. There were 606 students in addition to 28 foreigners who were in attendance upon lectures. The Library of the university contains 91,881 volumes.

THE UNIVERSITY OF DORPAT is composed of five faculties, viz., of law, of theology, of history and philology, of physics and mathematics, and of medicine. There were in 1853, 71 professors and other officers, and 634 students. The Library contains 87,496 volumes.

* The faculty of medicine is not needed in this University, on account of the excellent Medico-Chirurgical Academy which exists in St. Petersburg, on a separate foundation.

† This Library is quite distinct from the Imperial Public Library of St. Petersburg, one of the largest collections of books in the world, numbering not far from half a million of volumes.

SCHOOLS OF SPECIAL INSTRUCTION. The Government of Russia has done as much as any other in Europe, within the last half century, for the establishment and maintenance of schools of special training, where men from every quarter of the empire may be fitted by appropriate courses of instruction, for practical yet scientific pursuits—as the improvement of agriculture, the protection and cultivation of forests, the development of mines and the perfection of manufactures.

“In the first place, the military schools are cared for. In the old and new capitals, of Moscow and St. Petersburg, and in two or three smaller places, immense academies for the training of officers are established and munificently sustained. One such institution in St. Petersburg had, a short time since, more cadets than the whole number of officers in the United States’ army; while in the five-and-twenty military schools of the empire, there were, in 1854, more than eight thousand cadets, or three-fourths the number of our regular troops, officers, privates, and musicians included. These schools are for different objects; one trains officers of the guard, another those of the line, and others are for the cavalry, the artillery, and the corps of engineers. In all between eight and nine hundred instructors are employed, and their systems of instruction, pursued through several years, will compare most favorably with those of the military academies in any other country. Next to the schools of preparation for the army, are those of the navy. One of these, the Marine Corps of St. Petersburg, with its ninety officers and nearly six hundred pupils, is in every respect a first-class establishment; and among the other establishments, subordinate to the Ministry of the Marine, ten in number, with nearly four thousand pupils, are schools for training sailors for the merchant service, the customs, and other maritime occupations.

Every one knows how rich are the mines of Russia, and with what success they are worked. It is not so well understood that since the time of Peter the Great, the government has made enormous appropriations to maintain a corps of miners, who shall combine the most thorough scientific training with abundant practical experience. The high school of miners in St. Petersburg, with its thirty-six instructors and two hundred and fifty scholars, is supported by seventy-four lower mining schools in different parts of the empire, to which it furnishes instructors from its graduates, and from which, in turn, it derives well-fitted pupils. The course of instruction in the school at St. Petersburg occupies eight years, and is rendered exceedingly valuable by the attainments of its officers, the extent and completeness of its geological and mineralogical museums, its collection of mining apparatus, and its large models of coal, copper and gold mines.

Russia is not less renowned as an agricultural than as a mining country, and the wisdom of the government is seen in providing as well for the improvement of its forests and fields, as for the skillful working of its beds of ore. A few miles from St. Petersburg, on a fine farm, provided with all the suitable buildings, well stocked with cattle and rich in museums, is the chief agricultural school. Two hundred and eighty students, chosen from all parts of the empire, here receive, at the expense of the Crown, such instruction as will make them most useful in the neighborhood of their own homes, to which they are finally sent back. Their studies continue for five years, although strictly confined to agriculture. For the training of foresters there is a totally different school, where the culture of trees, their preservation and use, is taught as a practical science by nearly forty teachers to two hundred and fifty scholars. Near Moscow is another large agricultural academy, and in not less than eight other places of the empire, are model farms, almost every one of which is attended by more than one hundred pupils. Horticulture and the veterinary art are taught in entirely distinct establishments, their general principles only being inculcated in the institutions just referred to.

But this is not all that Russia is doing to develop by educational appliances its various resources. It is still behindhand in its manufacturing indus-

try. Its high tariff and its splendid establishments supported by the crown for making porcelain, glass, tapestry and other articles of luxury, have not done all that is needed. Technological education has, therefore, been added to its system of special training, and in the Polytechnic Institute of St. Petersburg, under the care of twenty-five instructors, more than two hundred and sixty pupils are fitting themselves by the study of chemistry, mathematics, and the laws of design as applied to the arts, for various elevated industrial pursuits. Special schools of design in both the old and new capitals of the empire, are attended by nearly one thousand scholars.

The construction of roads and bridges is taught in two schools to nearly five hundred pupils. Every form and dialect of the Oriental languages are taught in the Philological Institute by thirty-six teachers, to over two hundred pupils who are training themselves to be interpreters among the various nations which bound the eastern and southern portions of the empire. Even the Post-Office service has three schools located at St. Petersburg, Moscow and Totolsk, and specially devoted to candidates for its employment.

It is thus that Russia, a new power among the nations of the earth, a nation not composed, like our own, of emigrants from civilized lands and their direct descendants, but of men who are not yet freed from the title of barbarians, is seeking to improve its internal affairs, and to develop wisely its wonderful capacities. The variety of these special schools, manned by such large numbers of instructors, attended by so many thousands of pupils, endowed with rich museums, well filled libraries and admirable apparatus, giving instruction in the latest discoveries of science and in the principles of industrial art most approved in the establishments of every other nation, is fast tending to place Russia in the forward ranks of civilization."—*New York Tribune*.

MILITARY SCHOOLS. The London Times acknowledged not long ago, in an editorial article, that one great cause why the allies had been less successful than they hoped to be in the present war, was their ignorance of the extent and character of the Russian Institutions for military education. The officers trained in such establishments are not surpassed in preparation for the duties of their profession by those of any country.

According to the *Kalender* for 1855, of the St. Petersburg Academy of Sciences, the number of officers and cadets in the military schools of the empire was as follows, upon the 1st of January, 1854.

St. Petersburg Military School District.

	Instructors.	Pupils.
Imperial Page Corps, - - - - -	50	167
School of Sub-Ensigns of the Guard and Junkers, -	35	253
First Cadet Corps, - - - - -	67	603
Second Cadet Corps, - - - - -	76	603
Pawloff Cadet Corps, - - - - -	63	501
Novogorod Cadet Corps, - - - - -	16	391
Grusinian Cadet Corps, - - - - -	(was not opened.)	
Finnish Cadet Corps, - - - - -	20	131
Alexandroff Cadet Corps, - - - - -	25	361
The Noble Regiment, - - - - -	102	863

Moscow Military School District.

First Moscow Cadet Corps, - - - - -	42	567
Second Moscow Cadet Corps, - - - - -	44	398
Alexandrine Cadet Corps for Orphans, - - - - -	29	228

	Instructors.	Pupils.
Orloff Cadet Corps, - - - - -	22	383
Alexandriff Cadet Corps in Tula, - - - - -	11	104
Michael Cadet Corps in Worones, - - - - -	28	393
Tamboff Cadet Corps, - - - - -	7	105
Kasan Cadet Corps, - - - - -	(was not opened.)	
Department for those of under age in the 1st corps, - - - - -	21	97
Orenburg Cadet Corps, - - - - -	21	197
Saibirian Cadet Corps, - - - - -	16	220

Western Military School District.

Polozk Cadet Corps, - - - - -	31	377
Petroff Cadet Corps in Poltawa, - - - - -	36	411
Alexandroff Cadet Corps in Brest Litowakij, - - - - -	19	404
Wladimir Cadet Corps in Kieff, - - - - -	24	254

Chief Engineer's School, - - - - -	46	126
Michael Artillery School, - - - - -	38	150
Total, - - - - -	879	8,269

BELGIUM.

INDUSTRIAL SCHOOLS. The "Journal of Industrial Progress," (Dublin, February and March, 1855,) contains two articles, historical and statistical, on the state of Belgian Industry, and on Apprentices' Workshops (for boys) and Apprentices' Schools (for girls.) The following particulars are taken from that source.

In East and West Flanders, in 1854, there were open 65 *ateliers d'apprentissage* (making plain fancy fabrics in wool, cotton, linen and silk) of which 60 were aided by the government; 64 of these workshops had 2,148 persons in apprenticeship, and had already trained 9,317 persons—total, 11,465. In 53 localities out of the 65, the rate of wages had been increased in consequence of the workshops. In many cases the wages of the trained workmen were double, in some even treble, and in most cases from thirty to fifty per cent. more than that of the untrained workmen before the establishment of the shops.

Of *Ecoles d'apprentissage* for girls, (to be distinguished from the *ateliers* for boys,) there were 740 in Belgium in 1852, attended by about 45,000 pupils, chiefly young girls. 363 of these were supported by private persons, the remainder by authorities in the church or commune. The making of lace, muslin, embroidery, knitting, fringe, gimp, gloves, &c., is encouraged in these schools. Attendance of two hours daily in the classes for two years, is sufficient to enable the pupil to learn to read, write and calculate, and to acquire a knowledge of French as well as Flemish.

GREAT BRITAIN.

APPROPRIATIONS FOR EDUCATION, SCIENCE AND ART, IN 1855-56. An analysis of the appropriations for Public Education in Great Britain and Ireland, and of that for the Department of Science and Art, for 1855, will suggest some objects worthy of the attention of statesmen and educators on this side of the Atlantic. The annual appropriations by the British Government for these objects, for the year ending 31st March, 1856, amounted to £816,323, or over \$4,000,000.

ENGLAND AND WALES.

The grant of £381,921 for Public Education in Great Britain, exclusive of Ireland, is distributed in the following manner.

1.	In aid for building, enlarging and furnishing School-houses,	£70,000
2.	“ purchase of Books, Maps, - - - -	4,000
3.	“ Stipends of Pupil Teachers, - - - -	145,000
4.	“ Capitation Grants, - - - -	12,000
5.	“ Augmentation of Salaries of Teachers—Principals,	47,000
6.	“ “ “ “ Assistants,	4,500
7.	“ 34 Training or Normal Schools, - - -	54,050
8.	“ Retiring Pensions for incapacitated Teachers,	1,000
9.	“ Salaries and other expenses of Committee of Council on Education, - - - -	11,431
10.	“ 41 Inspectors of Schools—Salaries and Travel,	31,940

The grant of £79,364 to the Board of Trade in aid of its Department of Science and Art, was distributed as follows :

1.	General Management—Salary of Secretary, &c., - - -	£2,767
2.	Central Institutions—London, - - - -	30,000
	Industrial Museum—Scotland, - - -	1,763
	Museum of Irish Industry, - - -	4,707
	Royal Dublin Society, - - - -	6,000
	Royal Irish Academy, - - - -	300
3.	Aid to Schools by means of Examples, Diagrams, &c., -	4,500
	Salaries to Masters, &c., - - - -	12,000
4.	Normal Lace School, Ireland, - - - -	500
5.	Prizes, &c., - - - -	2,400
6.	Inspection—Salaries, - - - -	2,100
	Travel, &c., - - - -	2,000
7.	Geological Survey of the Kingdom, - - - -	6,100
8.	Meteorological Observations at Sea, - - - -	6,100

We shall have occasion to speak of the results of these and other appropriations for Educational purposes in Great Britain, in noticing the published reports of the several bodies entrusted with the expenditure.

UNIVERSITY FOR LEGAL EDUCATION, to meet the demands for a more thorough and systematic education for the Bar.

In 1853, a Parliamentary Commission was appointed to inquire into the arrangements of the Inns of Court and Chancery for promoting the study of the law and jurisprudence. The commissioners were Sir William Wood, Sir John Taylor Coleridge, the Attorney General, the Solicitor General, Sir T. E. Perry, Mr. Lefevre, Mr. Keating, Mr. Greenwood and Mr. Lavie. Their report has just been published. It contains the result of their inquiries into the property of the several Inns of Court—into the method of conducting legal education in the principal States of Europe and America, and as to the improvements which may be made in the English system.

"The commissioners, in concluding their report, recommend that the Inns of Court should be united in a university, but still preserving their independence respectively as distinct societies with respect to their property and internal arrangement, and that such university might not only regulate the examinations, but might likewise confer degrees in law. It is observed that such degrees might be of considerable professional value, that early opportunities of practice are of great value to the barrister in stimulating his industry and in the timely development of his talents. Such opportunities might more frequently arise if the solicitor had any such grounds to justify his selection of a young barrister as might be afforded by degrees or other distinctions granted to students in respect of their examinations; and that country gentlemen, also, who are not desirous of practicing as barristers, might nevertheless be glad to avail themselves of the opportunity of legal study afforded by such an university. The commissioners deem it advisable that there should be established a preliminary examination for admission to the Inns of Court of persons who have not taken a university degree, and that there should be examinations the passing of which should be requisite for the call to the bar, and that the four Inns of Court should be united in one university for the purpose of these examinations and of conferring degrees, and they then propose the following heads of a scheme for that purpose:

1. That a university be constituted with a power of conferring degrees in law, of which the constituent members shall be the chancellor, barristers-at-law, and masters of laws.
2. The chancellor of the university to be elected for life, the electors being all barristers (including serjeants) and masters of laws.
3. That a senate, consisting of thirty-two members, shall be elected in manner following, viz., eight members shall be elected by each Inn of Court, five of them being Benchers of the inn, and elected by the Benchers; and three of them being barristers (including serjeants) of any inn, but elected by the barristers (exclusive of the Benchers) of the inn to which they belong.
4. That one-fourth of the senate shall retire annually, but the retiring members to be re-eligible.
5. That a vice-chancellor shall be elected by the senate from their own body, and upon his ceasing to be a member, a fresh election shall take place. The vice-chancellor shall preside at the meetings of the senate with the privilege of a casting vote. (The details as to convening meetings, a quorum, and the like, will be provided for in any charter or act of incorporation.)
6. That the senate and vice-chancellor shall not receive any emolument, but shall have power to appoint a treasurer, a secretary or registrar, and other proper officers.
7. That the existing arrangements for the payment of the readers of the Inns of Court be continued, and that the senate shall from time to time direct the payment of such fees as they shall think fit by the students toward the expenses of the university, and shall transmit tables of such fees to the Inns of Court. And any further funds that may be requisite shall be provided by the Inns of Court.

8. That the meetings of the senate be in the hall of one of the Inns of Court.

9. That the government of the university be the chancellor and Senate.

10. That there shall be,—

(1.) A preliminary examination of candidates for admission as students at the Inns of Court.

(2.) An examination in law of students desirous of being called to the bar or taking a degree of master in laws. That there shall be two of each of such examinations respectively held every year, the one shortly before Michaelmas Term, and the other shortly before Easter Term.

11. That no person shall be examined for admission as a student at an Inn of Court unless he shall produce his conditional admission by the inn, subject only to his passing such examination.

12. To pass such preliminary examination such persons must possess a competent knowledge of English history and Latin.

13. No person shall be admitted as a student into any Inn of Court unless he shall have passed the preliminary examination, or have obtained the degree of a Bachelor of Arts, or Inceptor or Bachelor in Law at some university within the British dominions.

14. The subjects for the examination of students desirous of being called to the bar or of taking a degree in laws shall be divided into two branches, consisting of the following subjects :

First branch—(a.) Constitutional law and legal history. (b.) Jurisprudence. (c.) The Roman law.

Second branch—(a.) Common law. (b.) Equity. (c.) The law of real property.

15. That no person shall be called to the bar unless he shall receive a certificate from the senate of having passed a satisfactory examination in at least one subject in each of the above branches.

16. That students may present themselves as candidates for honors at the examination in such branches, and, if they shall be deemed by the examiners to have passed a creditable examination in all the subjects of either branch, they shall be entitled to a certificate of honor, in respect of such examination; and, if they shall have passed a like examination in all the subjects of both branches, they shall be entitled to the degree of master of laws. The senate to make regulations in respect of the classification of the students for honors.

17. That at each examination a studentship of fifty guineas per annum, to be held for four years, be awarded to the master in laws who shall have passed the best examination.

18. That all persons desirous of being called to the bar, and all candidates for honors, other than candidates for the studentship, may, as they think fit, pass their examination in each branch either at the same time or at separate times; but the candidates for the studentship must be examined in both branches at the same time.

19. That the examiners be appointed by the senate.

20. That readers be appointed, as at present, by the Inns of Court, the senate appointing the fifth reader, now appointed by the Council of Legal Education, with power for each Bench (if it think fit,) subject to the approbation of the senate, or for the senate, on the joint application of all the Benches of all the inns, to appoint additional readers.

21. The Inns of Courts not to be compelled to call to the bar those who have passed an examination, but to retain their present powers with reference to the calling of students to the bar, and the dis-barring of persons after their call, subject to the appeal to the judges."

"The commissioners would venture to suggest, in conclusion, that the several universities of the realm would, in their judgment, co-operate more effectually in advancing legal education by a sound and liberal training for the students intending afterward to enter upon the profession of the law—a training limited in respect to that study to general principles—than by increasing the amount of special instruction which the Inns of Court should properly supply."

THE MIDLAND INSTITUTE AT BIRMINGHAM. A new Scientific School has just been established in Birmingham. The corner-stone of the building was laid by his Royal Highness, Prince Albert, on the 22d November, 1855, in the presence of a large concourse of the workmen of that great manufacturing district, and of literary and scientific men from all parts of England. The character of the Institute and the proceedings justify a more extended notice.

Lord Calthorpe, the President of the Institute, in his address in behalf of the Council, to Prince Albert, remarked that the enterprise was one of the results of the Great Industrial Exhibition of 1851, which had shown that to meet the sharp competition of French and other continental workshops in the markets of the world, the English manufacturer and workman must have a higher scientific and artistic training than was provided in existing institutions of education.

"In the design of the Birmingham and Midland Institute, the general features of a Literary and Scientific Institution are combined with those of a school of industrial science.

In the former department provision will be made for libraries, reading-rooms, museums of geology, mineralogy, and natural history, for collections of fine art manufactures, machinery, and mining records, and for lectures and discussions on literary and scientific subjects.

The industrial department, which has received the approval and assistance of the Board of Trade department of science and art, has been already opened with considerable success; it provides systematic lectures and class instruction in mathematics, mechanics, chemistry, and other branches of science which are specially applicable to the manufacturing and mining operations of the district.

It is also intended to provide in the same building improved accommodation for the Government School of Ornamental Art, which has long been established in Birmingham with the happiest success.

Such are the general features of an institution destined, as we hope, to advance not only the material, but also the moral welfare of this great community, by uniting men of all ranks and of divers opinions in the promotion of studies which add dignity to daily labor, enlarge the faculties, refine the tastes, and fill the heart with nobler conceptions of man's destiny, and of God's all-wise, all-bounteous love.

On this commanding site, liberally given for the purpose by the municipal corporation of the borough, a building is to be erected in which literature, science and art, may be worthily enshrined under one roof."

In a speech after the corner-stone was "well and truly fixed," Prince Albert uttered some truths which American manufacturers and workmen will do well to heed.

"Without a knowledge of the laws of nature which are set in operation in every workshop, we are condemned to one of three states: Either we merely go on to do things just as our fathers did, and for no better reason than because they did them so; or, trusting to some personal authority, we adopt at random the recommendation of some specific, in a speculative hope that it may answer; or, lastly—and this is the most favorable case—we ourselves improve upon certain processes; but this can only be the result of an experience hardly earned and dearly bought, and which, after all, can only embrace a comparatively short space of time, and a small number of experiments. From none of these causes can we hope for much progress; for the mind, however ingenious, has no materials to work with, and remains in presence of phenomena, the causes of which are hidden from it. But these laws of nature—these Divine laws—are capable of being discovered and understood, and of being taught, and made our own. This is the task of science; and, while science discovers and teaches these laws, art teaches their application.

Far be it from me to undervalue the creative power of genius, or to treat shrewd common sense as worthless without knowledge. But nobody will tell me that the same genius would not take an incomparably higher flight if supplied with all the means which knowledge can impart; or that common sense does not become, in fact, only truly powerful when in possession of the materials upon which judgment is to be exercised. The study of the laws by which the Almighty governs the universe is therefore our bounden duty. Of these laws our great academies and seats of education have, rather arbitrarily, selected only two spheres or groups (as I may call them,) as essential parts of our national education—the laws which regulate quantities and proportions, which form the subject of mathematics, and the laws regulating the expression of our thoughts through the medium of language—that is to say grammar, which finds its purest expression in the classical languages. These laws are most important branches of knowledge; their study trains and elevates the mind. But they are not the only ones; there are others which we can not disregard, which we can not do without. There are, for instance, the laws governing the human mind and its relation to the Divine Spirit—the subjects of logic and metaphysics. There are those which govern our bodily nature and its connection with the soul—the subject of physiology and psychology. Those which govern human society and the relations between man and man—the subjects of politics, jurisprudence and political economy, and many others. While of the laws just mentioned some have been recognized as essentials of education in different institutions, and some will, in the course of time, more fully assert their right to recognition, the laws regulating matter and form are those which will constitute the chief object of your pursuits, and as the principle of subdivision of labor is the one most congenial to our age, I would advise you to keep to this speciality, and to follow with undivided attention chiefly the sciences of mechanics, physics and chemistry, and the fine arts in painting, sculpture and architecture. You will thus have conferred an inestimable boon upon your country, and in a short time have the satisfaction of witnessing the beneficial results upon our national powers of production. Other parts of the country will, I doubt not, emulate your example, and I live in hopes that all these institutions will some day find a central point of union, and thus complete their national organization.”

The **WORKING-MEN'S COLLEGE**, in Red Lion Square, London, was opened in November, 1854, with 140 pupils, distributed through classes in Arithmetic, Algebra, English Grammar, Geography, History, Drawing, Geometry, Mechanics, Astronomy, Practical Jurisprudence and in the French and Latin Languages. There was besides an Evening Adult School to prepare pupils for the College in reading, writing and arithmetic. The instruction in the College is given by a number of gentlemen of the highest literary reputation, among whom we see the names of Rev. F. D. Maurice, D. D., late Professor in King's College, Mr. Westlake, Mr. Neale, Mr. Ludlow, and Mr. Ruskin and others, whose reputation give character to the enterprise. The College is designed for adults actually engaged in business, not for children, or boys who are merely preparing themselves for business. It has been arranged that ultimately the members shall be divided into five classes. The first will consist of the general body of Matriculated Students; the second, of Students who obtain a certificate of competency in some one branch of study after they have attended the College for four terms; the third, of Associated Students, who shall prove that they have a competent knowledge in the principal subjects of our teaching, no effort being made to elicit their opinions, but a reasonable knowledge of Scripture History, of English History, of the principles of English Grammar, and of either Geometry or Algebra, being considered indispensable. The fourth class will consist of Fellows, that is, of persons chosen out of the Associates, who shall be considered morally and intellectually capable of assisting in the education of the Students. The fifth class will contain the Council, which it is proposed should be recruited from the Fellows. These arrangements may admit of modifications; but they are the basis of a scheme which we trust will give solidity and unity to our society.

IRELAND.

The sum of £215,200 granted to the Commissioners of National Education in Ireland, was distributed to the following objects: the bare enumeration of the amount and object shows the magnitude which the system has attained from the first grant of £4,328 in 1831, in aid of 789 elementary schools.

1. Normal Establishment at Dublin for training Male and Female Teachers, viz.,		
For 2 Professors and 2 Assistants, on the art of Teaching, &c.,	£1,440	
For Board and Travel of Teachers under training—Males,	5,000	
For " " " " " "	1,250	
For Central Model School Department—Male School,	823	
Female School,	465	
Infant School,	325	
For West Dublin Model School,	585	
For Glasnevin Model Literary and Industrial School at Glasnevin,	285	
2. The Albert Agricultural Training Establishment and Model Farm at Glasnevin, for 90 Agricultural pupils,	4,925	
3. The Glasnevin Model Garden, including Conservatory,	2,000	
4. Nineteen Model Agricultural Schools, &c.,	8,700	
5. In aid of building and furnishing ordinary School-houses,	5,000	
6. " " District Model Schools,	18,540	
7. Salaries of Teachers in National Schools,	117,938	
8. Premiums in encouragement of neatness and cleanliness,	1,000	
9. Gratuities to aged and infirm Teachers,	2,000	
10. Inspection Department—6 Head Inspectors, at £400,	19,900	
10 First Class Assistants, at £325,		
40 Second Class " at £250,		
6 Sub-Inspectors at £200 and expenses,		
11. Book Department,	10,250	
12. Official Establishment at Dublin,	13,000	

THE ENDOWED SCHOOL COMMISSION. A Commission appointed by Parliament has been for some time engaged in inquiring into the management and condition of endowments for educational purposes in Ireland. The inquiry already embraces fifteen hundred endowments, from which it appears that vast funds are either locked up, or diverted from their original channels, or so administered as to be useless for the education of the community at large. In some instances the land bestowed for the support of the school, has been converted into private property; and in others, the income passes through so many hands, that it is absorbed before it reaches the object for which it was given. The inquiry thus far shows that there is a disposable annual income of near \$500,000; a sum sufficient to support a scheme of secondary education for each county, supplementary to the national and other elementary schools, and preparatory to the higher institutions. The commission is now engaged in looking into the facilities of education enjoyed in each county, with a view of recommending a plan for the better use of the income of these endowments.

SCOTLAND.

EDUCATIONAL REFORM. The spirit of reform is at work in reference to the Parochial Schools and the Universities. It is found that while the population has increased, the facilities of instruction, both in the lower and higher schools, have not been augmented, or their efficiency increased. For the reorganization of the Parochial Schools, three bills were introduced into the last session of Parliament, all of which were lost mainly on account of the difficulty of adjusting the religious question, which is one main objection to the administration of the system as it is. For the extension of the Universities, an Association has been formed, which has presented a memorial to Government, asking for aid by a grant of public money for the more liberal endowment of such existing Chairs as are at present inadequately provided for, and for the endowment of such additional Chairs as may be requisite; *First*, to render the Scotch Universities centers, around which a learned class may form itself; and *Secondly*, to place them, as educational establishments, on something like a footing of equality with the Universities of other countries, where the professorial system prevails. The following table exhibits the

SALARIES OF PROFESSORS AT SCOTCH UNIVERSITIES.

	Edinburgh.	Glasgow.	Aberdeen.			
			St. Mary	St. Salvador & St. Leonard.	King's.	Marischal.
	£	£	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Principal,			93 0 0	55 11 0	20 0 0	60 0 0
Prof. of Ecclesiastical History,	100		86 1 8			50 0 0
“ Hebrew,	30		86 1 8			
“ Divinity,	30		86 1 8		12 0 0	53 0 0
“ Greek,	30		86 1 8	55 11 0	10 8 8	43 16 8
“ Mathematics,	30	62		55 11 0		43 16 8
“ Rhetoric and Belles Lettres,	100					
“ Civil History,				55 11 0		43 16 0
“ Physic,	75					
“ Medicine,	75			55 11 0	10 8 8	100 0 0
“ Materia Medica,	100					
“ Humanity,	30	25		55 11 0	10 8 8	200 0 0
“ Logic,	30	11		55 11 0		
“ Moral Philosophy, ...	30	11		55 11 0	10 8 8	43 16 8
“ Natural Philosophy, ..	30	21		55 11 0	10 8 8	43 16 8
“ Civil Engineering, ..		275				
“ Civil Law,					10 8 8	
“ Medical Jurisprudence, ..	100					
“ Midwifery,		50				
“ Oriental Languages,		20				33 0 0
“ Chemistry,		200				210 0 0
“ Botany,	100	100				
“ Anatomy,		130				150 0 0
“ Pathological Surgery, ..	100					
“ Surgery,	100	75				100 0 0
“ Astronomy,	300	50				
“ Natural History,	100	150				

* £150 additional.

† And Logic.

‡ And Botany.

THE DICK BEQUEST.

THE DICK BEQUEST consists of a Fund of £118,787, the income of which, amounting to about £20,000, since 1835, has been distributed annually "to encourage active schoolmasters, and gradually elevate the literary character of the parochial schoolmasters and schools" in the counties of Elgin and Moray, and the neighboring counties of Banff and Aberdeen. The founder of this munificent bequest was James Dick, Esq., of Finsbury Square, London. He was born of poor and respectable parents, in the burgh of Forres, Morayshire, Scotland, upon the 14th of November, 1743. He received a good elementary education in the parochial school of his native town, and at the age of nineteen went to the West Indies, and entered a mercantile house at Kingston, Jamaica, where his talents and industry soon gained for him a share in his employer's business. After twenty years he returned to England with a considerable fortune, to which by persevering habits and judicious speculation, he afterward made large additions. Mr. Dick was married and had a son and daughter. After the death of his wife and son, he made a will, in which, after making liberal provision (\$150,000) for his daughter and her children, and providing a fund of £1,000 for the annual distribution of coal among the indigent poor of his native town, he bequeathed the bulk of his estate to the maintenance and assistance of the "*County Parochial Schoolmasters*" of the district of Scotland in which he was born. He died on the 24th May, 1828. By a decree of the Court of Chancery, the administration of the bequest was vested in "the Keeper and Deputy Keeper of the Signet, the Treasurer of the Society of Writers of the Signet, and eight Commissioners chosen by and from among the Commissioners of the Signet;" and in 1835, the first distribution of the income of the property, which had accumulated to the capital sum of £118,787, took place. The history of the aims and operations of the Trustees, for twenty years, the results of this noble benefaction in behalf of "a neglected though useful class of men," both to the teachers and schools of that section of Scotland, has been set forth in two highly interesting and instructive reports—the first published in 1843, at the end of ten years, and the second at the close of twenty years of their administration. These reports, making two volumes, one of 424 pages and the other of 478 pages, were drawn up by Prof. Allen Menzies, the Secretary of the Trustees, and are valuable contributions to the educational literature of the English language. From these reports we propose hereafter to present a brief view of the manner in which the Trustees have discharged their duty, and to gather a few of the practical lessons as to the administration of educational funds,* both on a large and a small scale, which their experience suggests.

The view upon which the trustees proceeded, was to adopt a system which should affect the school beneficially in all its relations,—that the

* If the School Fund of Connecticut could have been administered on the principles recognized and followed by the Trustees of the Dick Bequest, so as to have quickened the zeal of parents, the diligence of teachers, the liberality of the public and the punctual attendance of children at school, it would have proved an unmingled blessing.

principle of division, while conveying Mr. Dick's bounty to the deserving teacher, should be such as to advance at the same time the reciprocal claim of the bequest to have the school elevated and improved, and to make this claim be felt not only by the schoolmaster, but by every one connected with the school, and interested in its well-being and progress,—that the attention of all should be directed each to his duty in connection with the school, and that those who had the power to supply any deficiency, should be induced to make an exertion for that purpose.

Thus the bequest would not descend upon the parish as it were by an irresistible fatality, without regard to consequent good or evil, but would be looked upon as a thing to be striven for, not for the good of the receiver alone, but for the benefit of all interested in the school, and to obtain which all might more or less contribute by their efforts,—the electors by the choice of a well-qualified teacher,—the teacher by diligence and advancement in learning and skill,—the heritors by giving ample endowment,—the minister by his superintendence and the influence of his counsel with teacher and parents,—the people at large by securing regular attendance, enlarging their children's field of study, and seconding by their authority at home the teacher's efforts for their improvement, and the presbytery by a wholesome and elevating influence brought to bear upon all parties and subjects, and especially upon the vital matter of the religious training of the pupils.

THE CANADA SYSTEM OF PUBLIC SCHOOLS HELD UP AS A MODEL FOR SCOTLAND BY THE EARL OF ELGIN. At a public meeting in Glasgow, on the 4th of January, on the occasion of the freedom of the city being presented to him in consideration of his public services as Governor General of Canada, Lord Elgin thus refers to the system of public education in that province.

"I need not say to you that there is no subject upon which the people of the United States are more proud than they are in reference to their system of national education, and they certainly have very good reason to be so, because, while we are in this country proclaiming vociferously our zeal for popular education, and proving our sincerity by uniting to overwhelm every specific plan that is produced, there is actually in that country in operation a system that is elevating the intellectual standard of that people to an elevation never before attained by any community. At the last meeting of the American Education Association, a paper was read, representing the system of education in Canada as equal to that in Massachusetts or New York, and the President recommended the system adopted at Toronto, Canada West. I do not think it undesirable that the population of Scotland should know, that there is a country not two weeks sailing from Glasgow, possessing a fertile soil and a genial climate—possessing a population very much resembling what you find in any Scottish county, sharing our views and sentiments on all questions, moral, social, political, and, above all, religious, with the means of attaining elementary education, free of cost, and on conditions that can do violence to no principle, on conditions attainable by every child in the community, and where every child of talent and industry may go to the higher school, where a superior education is given on the same terms, and from the superior school to the University. Now if any lady or gentleman in this room wants to put the question, if we can get all these advantages by going to Canada, why we can not get them without going to Canada, I implore that they will not expect me to answer it."

FRANCE.

AN ACCOUNT OF PUBLIC INSTRUCTION IN AMERICA. *La Revue de l'Instruction Publique*, the semi-official educational journal of Paris, has been publishing for several months a series of papers on Popular Education in America. Their author, M. Le Roy, professor in the University of Liege, translated some time ago a portion of Dr. Wimmer's excellent work on the Church and the School in this country, and has otherwise qualified himself for a discussion of our systems of instruction.

The following paragraphs translated from his seventh article, give an interesting comparison between the state of things upon different sides of the ocean.

"Public instruction is in our day more of a national business in North America, than in any other country of the world. Not only are legislators well disposed toward existing institutions, but if a new idea is thrown out in the columns of a journal, if a novel method has been tried in this place or that, if a system of administration, without precedent, has been the object of fortunate experiment, the most eminent men in legislative assemblies and in the country receive that idea, take cognizance of that method, study the mechanism of that system, and inquire seriously if they can not find therein some new means of accelerating progress.

The improvement of schools is, so to speak, the fixed idea, the constant pre-occupation of statesmen in America.

Among most European nations we find that public instruction is directed, inspected, administered by special functionaries to whom belongs the initiative in pedagogical matters. There is confidence in their decision, or if there is dissatisfaction it is from a political point of view, as to who in church or state shall direct or inspect the school. Inquiry has less reference to the pupils than to the dominant influence of this or that power.

But in America, where the schools are not governmental but national, the question of education is a popular question. School inspectors are men engaged in active life, in public business, and thus the atmosphere which is breathed in the classes is not sensibly different from that without. The motto, 'Give me the education of a generation, and I will transform the world,' is understood in all its extent by every American citizen. The wisdom of that nation declares that the prosperity by which it awakens the envy of the world, is due in a great measure to the diffusion of light among the masses. The incessant activity, the spirit of enterprise, which distinguish the Americans, would grow weak from the moment when public instruction should cease to be offered equally to all without exception, or should become stationary. The Americans have started at full steam upon a course where they can not stop a single instant; their power, their future depend upon this; the least success in a trial of obscurity (*obscurantisme*) would dismember that society, the condition of whose existence is movement itself. While we are living upon tradition, the Americans are incessantly looking toward the future. While we are discussing systems they are making experiments and profiting by our own.

This is why school matters are every body's business; why every year in all public meetings, the problem of increasing the national strength by instruction is continually taken up; this is why the popular representatives and not merely official functionaries, are informed upon educational questions and are charged with their solution."

SCHOOL FOR GIRLS AT PARIS. The following description of a Boarding School (*Pension*) for Girls in Paris, is extracted from a letter of a correspondent of the New York Tribune, who was for several years a teacher in the Public High School at Hartford, Conn.

"The pupils rise at six in the morning and retire at nine. They sleep in

large dormitories with their teachers and surveillantes. The beds are single, on iron bedsteads, ranged in rows along the rooms. One wonders how the occupants can be so ruddy and well when air is so feared in their sleeping-apartments, and so little water furnished in their dressing-rooms. But entire warm baths are frequent in the establishment, and the class-rooms and gardens offer more fresh air during the day than our school-girls are accustomed to enjoy.

The refectory is a bare, uncomely room, on the rez-de-chaussée, with brick floor, wood benches and oil-cloth covered tables. The fare is good, abundant and most healthful. At eight in the morning, after each class has had its prayers, and some have been to mass, all come in flocks to breakfast. Each mistress stands at the head of her table and says grace, meantime crossing herself twice, while the pupils do the same. Small white earthen bowls with bread are placed before each, and a choice of hot or cold milk is offered. Tea, coffee, chocolate and soup are prepared for those who need them, or have made a special arrangement for either. At noon the second breakfast is served, which is almost like a dinner, and at three, baskets of dry bread are handed about during recreation. At five the pupils dine. The lady of the house and her superior teacher serve both the dinner and second déjeuner, while servants hand the plates of rations to the various tables. The cook is incited to excellence by her mistress's constant inspection of her productions, and on the other hand, the girls are restrained from grumblings by the same presence.

Contrary to the custom with us in similar schools, the head of the Institution, her family and parlor boarders, take their meals apart from the scholars. Thus the privacy of domestic life is preserved, and the table kept open to any friends; thus the elegancies and comforts which a large establishment precludes can be gathered into the smaller circle of a private family.

The system of French female education is very different from that in our own country. Here the dead languages are left to blue stockings. Simple arithmetic is the extent of mathematics acquired; but history, literature, style, composition, reading and declamation, are much more studied than in our schools. The best professor of geography and history which Paris affords, spends three hours a day three times a week in the various classes. Monsieur P. is just the opposite of what his name would indicate. He is a tall man, bearing a high head replete with the profoundest erudition. He was instructor to the Queen of Spain, and wears her decoration on his breast. His lectures are mostly written down by the pupils and committed to memory for future examinations.

The Professor of Rhetoric renders his lessons also most useful and interesting. He is a man of high rank among French savans, yet he is proud to be a teacher of youth. He is not only master of eloquence and style, but a distinguished writer on botany and medical science—a kind of universal and most agreeable genius. He comes but once a week for two hours. He reads the girls' compositions aloud—commends their excellencies and criticises severely their faults. He listens to their repetitions of Boileau's "Art Poétique" and their repeated readings of some chosen bit of poetry or prose, previously studied and read aloud under the direction of the superior mistress. The History of Literature and the lives of great men are copied from his manuscripts and committed to memory word for word for future *concours*. His lectures take the form of conversation, interspersed with the choicest quotations and the nicest criticisms. When time permits he recites extracts from the great poets, or reads a popular play or witty story. Morality, thought and style are sought in all. His memory is a great store-house of all he has ever known. Nothing has been forgotten either of originals or translations. Homer, Virgil, Dante and Racine, flow with equal harmony from his lips. The age of Louis XIV., and, par excellence, the writings of Madame de Sévigné, are his favored loves in modern literature.

French girls read perhaps less than ours, yet far surpass them in acquaintance with native authors. They excel us, too, in a discriminating use of words and in a delicate appreciation of their value. With them style in expression is of parallel importance with distinction and grace in manners.

The great models, such as the letters of Madame de Sévigné, the plays of Corneille and Racine, the orations of Bossuet, and the fables of Lafontaine, are most familiar to their lips.

Beside the superior instruction given here in Ethics and Belles Lettres, there is another department of education, which, I fear, your Protestant prejudices will deny as really existing. It may be styled the Professorship of Religion. The religious teacher is as punctual as the masters of music and drawing. Though we complain that the Catholics refuse the Bible to the people, I do not believe there is any school in the United States where so much of it is learned as here. It is true that the Old Testament is refused to children—yet its sacred history is selected and arranged in a most complete and interesting way, and is learned by heart in the most conscientious manner. Beside this, the Psalms and most of the New Testament are also committed to memory. The history of the Church, the lives of the fathers and of the saints, form the prominent part of a French girl's education.

Not only is the superintendent of the house rigid in enforcing religious instruction upon the Catholics, but the Jew and Protestant pupils are as strenuously obliged to fulfill the demands of their own faith. There are but two little Jewesses in the school, and for them a Rabbi comes once a week to teach them their catechism and sacred history. Neither is allowed to taste pork, though both are sullen when ham or mixed pâtis are given to the others at déjeuner. The superior mistress, that angel of the house of whom I spoke in a former letter, has arranged a table-grace for them alone, and they must say it too as often as they eat, 'For,' says she, 'Jews as well as Christians should thank God for all His benefits.' They come night and morning to her knees to say their prayers. It is a curious picture that—those two little dark-eyed Israelites praying at the feet of a Jesuit. But what noble, generous principle exists in the latter to so carefully and conscientiously train these children according to the faith of their fathers.

The Protestant girls go to the English teacher for prayers, and she accompanies them to the Lutheran or English church, and to their religious instruction for their first communion. I can scarcely imagine how the mistress would regard a grown-up American girl who had never made a profession of religion by the communion. A holy pity would seize her, and perhaps she would send at once for some religious instructor of her parents' faith to convert the benighted youth. But if the parents had no faith? Then I am puzzled.

Several American Protestant girls have acquired a thorough knowledge of French at this school. Their life here has been pleasant, their training maternal, their education useful. The expenses here are remarkably moderate in comparison with those of our city schools. Two hundred dollars per annum includes board and French tuition. Other languages and the accomplishments of course are extra. I had forgotten to mention that the pupils wear uniform within the pension, which makes the expenses of every-day dress very trifling. In summer their dresses are of purple calico; in winter of black or blue merino; a black apron with low waist and sleeves at option is always worn. Black cloaks and mantillas, with simple bonnets following the fashion, are required of the Catholics, who go together to church. The Protestants are accustomed to go out in their usual holiday suits.

CATALOGUE OF THE IMPERIAL LIBRARY, PARIS. The second volume of the Catalogue of the Imperial Library of Paris, has just been issued from the press of Didot. It includes all works relating to the History of France published after the reign of Louis XIV. till the 1st Vendémiaire, in the year I of the Republic, (22d September, 1792.)

It contains 20,272 titles, which, united to the 16,026 titles of the first vol., make 36,298 titles of articles relating to the History of France, thus far catalogued.—*Revue de l'Instruction Publique.*

HOLLAND.

We are indebted to Professor HENRY B. SMITH, D.D., of the Union Theological Seminary, for the following summary of the condition of the

DUTCH UNIVERSITIES.

Annales Académiques CXCXCCL—CXCXCCLL. 4° Lugdun, Batavorum, 1855. pp. 240.

THESE Annals present the statistics of the various Dutch Universities in 1850-1, with the usual academical orations. The work was issued in 1855, so that the statistics lag four years behind. But in so stable a country as Holland, the changes have, probably, not been very great.

The University of Leyden comes first in order. Johannes De Wal, rector magnificus, of the Faculty of Law, in a Latin oration of twenty pages, discourses upon the "Detriment which the Neglect of the Historical Study of our Jurisprudence has brought upon the Country and Science." Two other orations, in the Dutch language, follow: one by Dr. R. P. A. Dozy, on the "Study of the History of the Middle Ages," the other, by Mr. S. Vissering, on "Political Economy."

The whole number of students in the University of Leyden, 1850-1, was 357; viz., 177 in the Faculty of Law; 86 in Theology; 14 in Mathematics and Physics; 25 in Theoretic Philosophy and the Humanities, and 55 in the Medical Faculty. Besides these, 99 students, belonging to the *Athenaeums*, are inscribed upon the University books, as candidates for the degree of doctor in the different Faculties. Forty such 'doctors' are reported as created in the Faculty of Law, after presenting and defending their dissertations and theses, two or three days in each month being assigned for such exercises; in the Theological Faculty only two such doctorates were conferred, and only one other "*honoris causa*,"—a good example for our colleges; two received this degree in Mathematics; five in Philosophy; and thirty in Medicine.

The Lectures given in the different Faculties of this University, are the following:

In the Faculty of Law, J. DE WAL, on the *Encyclopædia* and Methodology of Law, three hours each week; on the History of Roman Law, three hours; on the Rise and Progress of Jurisprudence among the Germans, especially in the Netherlands, three hours; and on Mercantile Law, two hours. C. I. VAN AMER, Interpretation of the "*Libri Digestorum*," three hours; the Roman Civil Law, three hours; Commentaries on the Institutes of Gaius, two hours; the Present Civil Law, three hours; the Order of Judicial Causes, with forensic exercises, three hours. H. COCK, Public Law and the Law of Nations, three hours; Criminal Law, three hours; Natural Law, three hours; the Order of Criminal Trials, three hours. S. VISSERING, Statistics of the Netherlands, three hours; Diplomatic History of Europe, three hours; Political Economy, three hours a week.

In the Faculty of Theology:—W. A. VAN HENGEL, the venerable senior of this Faculty, though prevented from lecturing by age, met the more advanced students for familiar conference "*de variis rebus gravioris argumenti*." N. C. KIST, read on Church History, three hours a week; on the History and Theory of Christian Ethics, three hours; on the History of Doctrines, two hours; on the

Sources of Ancient Church History, one hour; and directed theological discussions, and humiletical exercises, one hour each. J. F. VAN OORDT, Systematic Theology, three hours; Gospel and Epistle of John, two hours; Theological Encyclopedia, two hours; Institutes of the Orator, two hours. J. H. SCHOLTEN, the Words of Christ in the Gospel of John, three hours; Natural Theology, or "History of speculation respecting God," two hours; the characteristic words and phrases in which the Nature of Christianity is expressed, two hours; also, discussions and sermons, one hour each.

In the Faculty of Mathematics and Physics:—J. VAN DER HOEVEN, Zoölogy, three hours; comparative Anatomy, two; also, private teaching in Mineralogy and Geology. A. H. VAN DER BOON MESCH, Organic Chemistry, three hours; Inorganic Chemistry, three; Pharmaceutics, two; Husbandry, two; with experiments in the laboratory, and a weekly colloquy on Chemical Physiology. I. G. VERDAM, Geometry and Trigonometry, plain and spherical, three hours each; the Differential and Integral Calculus. F. KAISER, Theoretical Astronomy, three hours; practical, three; popular, two; Algebra, three; with other practical exercises. H. G. DE VRIESE, Phytography, six hours; History (Medical) of Plants, three; Physiology of Plants, four; with botanical excursions and other exercises. P. L. RIJKE, Experimental Physics, five hours; Mathematical Physics, two hours.

In the Faculty of Theoretic Philosophy and the Humanities; J. BAKE, Cicero's Orations, three hours; Attic History, two hours; Pædagogic Schools, theory and practice, four hours. J. M. SCHRART, on Style and Eloquence, (Dutch,) three hours; History of the Netherlands, three hours; interpretation of Vondelius' Tragedy, *Gysbrecht van Amstel*, one hour; also, on the Critical History of Eloquence and German Antiquities. A. RUTGERS, Prophecies of Jeremiah and the Psalms, three hours; Second Book of Samuel, two; Hebrew Antiquities, three; Sanscrit Grammar and Anthology, two; the Sacuntala and Hitopadesa of Calidasa, one hour. T. G. J. JUYNBOLL, Elements of Hebrew, four hours; Arabic, Chaldee and Syriac, three; Hamaker's edition of an Arabic work "de Expugnatione Memphidis et Alexandrie," read with students, one hour; Arabic Chrestomathy, one hour; Songs of Hamaas, two hours; the Koran, two; Syriac Chrestomathy, one hour. J. H. STUFFKEN, Logic, three hours; Metaphysics, two hours; History of Philosophy, two hours; also, on Pædagogica. C. G. COBET, Herodotus, three hours; Roman Antiquities, three; Elements of Metrical Art, two; Greek Palæography, four; also, the direction of public disputations. R. P. H. DOZY, Prof. Extraord, History of Guelfs and Ghibellines, three hours; some difficult Historical Questions and various matters of Literary History, two hours.

In the Medical Faculty:—C. PRUYS VAN DER HOEVEN, Pathology, three hours; Medical Practice, daily; History of Medicine, two hours. G. C. B. SURINGAR, Therapeutics and remedies, five hours; the Pharmacopœia, three; Special Diseases, three hours; with medical practice. J. W. KRIEGER, Surgery, three hours; Clinical Exercises, three; Surgical Operations, two; the Diseases of the Eye, Forensic Medicine, two hours. A. E. SIMON THOMAS, Prof. Extraord, Obstetrics, one hour; also, lectures on the Diseases of Woman; "Præxin Obstericium in Nosocomio Academico, quæstio necesse erit, neoderabitur." H. HALBERTSMA, Prof. Extraord, Anatomy, five hours; Physiology with microscopic observations, five; Practical Dissections, four hours each day.

Besides these, Prof. P. O. van der Chijs, gave two lectures a week on Numismatics; C. A. X. G. F. Sicherer, on the Odes of Klopstock, and C. G. Lokkers, taught every day "aptum et elegantem gladii usum."

We have given thus, in full, the course in this leading University of Holland, that some general idea might be formed of the extent of the instruction in the various departments. Many of these names are widely known outside of Holland; as that of the venerable Van Hengel, who also directs the distribution of the prizes for the Society of The Hague, in Defense of the Christian Faith; of Kist, whose works in Church History, with those of Royaards of Utrecht, are widely known; of Hoevon, who has a European reputation; and of Juynboll, who, within the past five years has edited and published more works illustrative of Oriental literature than all the scholars of France and England, together. In a University with 237 students, Leyden has thirty-one Professors; five in Law; four in Theology; seven in Mathematics and Physics; eight in Philosophy; seven in Medicine; besides three other teachers.

The account of the University of Utrecht, is introduced with an instructive Latin Oration by the Rector, B. J. Lintel de Geer, beginning with a special address to nine classes or personages, among his auditors, on the "Laudable Efforts of the Roman Emperors for the Instruction of Youth," together with an account of the University for the preceeding year. The whole number of students was 381; 148 in theology; 166 in law; 43 in medicine; 13 in mathematics and physics; 11 in philosophy, etc. Twenty-six were also inscribed from the Athenæums as candidates for the doctorate; 21 doctors-in-law were made; 3 in philosophy; 17 in medicine; 2 in mathematics; 1 in theology.

In the Faculty of Law, the Professors are, A. C. Holtius, who read on the Pandects; B. J. L. de Geer, on Justinian, Roman Law, Encyclopædia of Law, and Gaius; J. van Hall, the Civil Law of Holland, Mercantile Law, Judicial Processes, and the History of Dutch Law; I. Aekersdyck, Modern Political History, Statistics and Political Economy, G. G. Vreede, Natural Law, History and Institutes of Dutch Law, and the Law of Nations, "duce Henr Wheaton, *Éléments du droit international*, Lips et Par. 1848;" and on Criminal Law.

In the Faculty of Theoretic Philosophy, etc. A. van Goudæver, read on *Salust* and *Virgil*, and Roman Antiquities; S. Karsten on *Plato* (*Phædon*), and *Aristophanes* (*Ranæ*), and on Greek Antiquities; I. C. Swyghuisen Grænewoud, Hebrew Grammar, and Antiquities, Arabic; L. G. Visser, Literature and History of Belgium, and Holland; S. Karsten, Ancient History, and History of Ancient Philosophy; C. G. Opzoomer, Logic, Metaphysics and History of Modern Philosophy.

In the Medical Faculty, I. L. C. S. van der Kolk, gave lectures on Anatomy and Physiology; B. F. Suerman on Pathology and Surgery; G. I. Looq, on *Materia Medica* and Therapeutics; G. I. Mulder, on Pharmacy; P. Harting, on Anatomy and Pharmacology; F. C. Donders, on Biology, Anthropology and Forensic Medicine.

In Mathematics and Natural Philosophy, R. van Rees, read on Physics and Mechanics; G. I. Mulden, on Chemistry; P. T. I. de Fremery, on Chemistry applied to the Arts; C. A. Bergama, on Botany; T. G. van L. de Iende, on Zoölogy and Anatomy; C. H. B. de Ballat, on Mathematics, etc.

In the Faculty of Theology, H. I. Royaards, lectured on Church History and Ethics; H. Bouman, on Natural Theology, Hebrew Poetry and the Epistle to the Romans; H. E. Vinke, on Dogmatic Theology, the Theology of Paul, and Pastoral Theology. German, French, and the "elegant use of the sword" are also taught.

The University of Utrecht, with 381 students, has twenty-four professors; five in law; five in philosophy; six in medicine; five in mathematics and physics; and three in theology.

The University of Groningen, is widely known by its new theological tendencies, akin to the modern German of the school of Schleiermacher. The Oration, in Latin, by the rector, F. Z. Ermerins, of the Medical Faculty, is on the "Perpetual Charge and Motion of Matter and Form in Life." This University has twenty professors: four in medicine; five in mathematics and physics; three in theology; five in philosophy; three in law. Its students numbered 228; 44 in medicine; 3 in mathematics and physics; 64 in theology; 7 in philosophy; and 110 in law. Sixteen doctorates were conferred in medicine; one in theology; one in mathematics; two in philosophy; and twenty-two in law.

The professors in the Faculty of Law, read as follows:—H. Nienhuis, Civil and Mercantile Law; J. H. Philipse, Justinian, the Pandects, etc.; C. S. Numan, Crimes and Punishments, the Nature of Law, the Political History of Europe, and Political Economy.

In the Medical Faculty; J. B. de la Faille, on Medical Practice, Forensic Medicine and Obstetrics; F. Z. Ermerins, on *Materia Medica*, Physiology and Pathology; J. H. Jansen, on Surgery and Anatomy, with classical lectures.

In the Mathematics and Physics:—T. van Swinderen, lectured on Natural History; H. C. van Hall, on Botany; I. G. Ermerins, on Arithmetic, Algebra, and Geometry; N. Mulder, on Chemistry; G. A. Enschedé, on Trigonometry, Algebra, and Geometry.

In the Faculty of Theology, Prof. P. F. de Groot, read on Church History, Theological Encyclopædia, Natural Theology, and the History of Modern Missions; L. G. Pareau, on Dogmatics and Apologetics, Christian Ethics, Hermeneutics, and Hebrew Poetry; G. Mäurling, on the Critical History of the New Testament, the Epistle to the Romans, and Practical Theology, (including Catechetics, Homiletics, and Liturgics.)

In the Faculty of Theoretic Philosophy and the Humanities, F. C. de Greuve, on Metaphysics, Logic, Ethics and Psychology; L. A. C. Rovers, on Modern History, Roman and Greek Antiquities; I. I. P. Valetou, on Hebrew Grammar, Hebrew Antiquities, the Semitic Dialects, the first Book of Kings, and the Psalms; J. A. C. van Heusde, the author of an admirable work on the Platonic Philosophy, lectured on Cicero's Tusculan Questions, on Aristophanes, on Plato's Republic, and the History of Greek Criticism; M. de Vries, on the History of Holland, with its Language and Eloquence, and on Sanscrit, with any who might apply.

The "illustrious Athenæum of Amsterdam," is included in these Annals; it had 152 students; 4 in philosophy; 7 in letters; 58 in law; 64 in theology; and 19 in medicine. It numbers fifteen professors:—three in Mathematics and Physics, E. H. von Baumhauer, the President, F. A. G. Miquel, and C. Matthes; four in Philosophy, D. I. van Lennep, I. Bosscha, H. Begermann, and P. J. Veth; two in Law, C. A. den Tex, and M. D. A. van der Haven; one in Theology, G. Moll; and five in Medicine, Ger. Vrolik, Guil. Vrolik, C. B. Tilanus, P. H. Suringar, and J. van Geuns.

The "illustrious Athenæum of Deventer," has six Professors; J. Verberg, in Theology; P. Bosscha, in Classics; T. D. van Twist, in Law; M. J. Cop, in Natural Philosophy; G. I. A. Jonckbloet, in History; T. S. M. van der Willigen in Physics. The number of its students is not given.

These Athenæums appear not to have the power of conferring degrees, but such of their students as wish to obtain degrees, are enrolled, and examined, for that object, in the Albums of the Universities.

The leading courses of lectures are still given in the Latin language. In the programmes, the fact that a particular course is in Dutch, is sometimes distinctly stated, as an exception.

The general arrangement of the Faculties and lectures is like that of the German Universities, excepting that there are five Faculties, instead of four. In the German High Academies, the Faculty of Philosophy comprises the subjects contained in the "Facultas Disciplinarum, Mathematicarum et Physicarum," and in the "Facultas Philosophiæ Theoreticæ et Litterarum Humaniorum," of the Dutch Universities. In the latter, too, the instruction in the Oriental languages, including the Hebrew, is assigned to the "Facultas Litterarum Humaniorum;" in the German Universities, the interpretation of Scripture books, Hebrew Antiquities and History, would generally fall to the Faculty of Theology.

When shall we be able, in this country, to publish such a Programme for a University course, as that of the University of Leyden?

PUBLIC SCHOOLS.

The following Table, taken from Lippincott's Pronouncing Gazetteer, gives the Number and Attendance of the Public Schools in 1851.

Provinces.	Area in sq. Miles.	Population in 1853.	Schools 1851.	Attendance 1851.
North Brabant,.....	1,988	405,525	408	41,634
Gelderland,.....	1,972	387,423	400	39,098
South Holland,.....	1,180	591,493	460	63,911
North Holland,.....	966	514,755	530	61,782
Zealand,.....	644	165,075	155	6,034
Utrecht,.....	532	155,324	153	16,771
Friesland,.....	1,272	259,508	355	34,118
Overijssel,.....	1,312	227,683	238	34,805
Groningen,.....	908	197,101	246	31,706
Drenthe,.....	1,032	87,944	140	11,965
Limburg,.....	856	211,401	210	19,191
Total,.....	12,662	3,767,671	3,295	361,015
Grand Duchy of Luxemb'g '51	981	194,619	.....	.....
Total,.....	13,643	3,962,290	.....	.....

If to the number of children (361,015) attending the Public Schools, be added, the number (23,000) attending Schools in Special Foundations; the number (40,000) attending Private Schools, and about 5,000 students attending the Universities, Athenæums, and Special Schools, we find about 430,000 persons, or one in every eight of the population in school.

PRUSSIA, SAXONY, AND AUSTRIA.

GERMAN UNIVERSITIES.

Slight discrepancies which may appear, on a comparison of the following tables, are to be accounted for, by the fact that there is occasionally a difference in the dates upon which they are based. As these dates, however, are always noted, no error can ensue. Pains have been taken to procure the most recent and reliable information:—part of it now first appears in print.

Tables showing the number of Professors, in the different faculties, in the Universities of Prussia, Austria, and Saxony.

KINGDOM OF PRUSSIA.

The following table is compiled, and the remarks upon it are mainly derived from a work now publishing in parts, at Leipsic, entitled "Der Preussische Staat, Handbuch der Statistik; von A. Franz."

TABLE I.—PRUSSIAN UNIVERSITIES.

Location.	Date of Foundation.	Number of Teachers.						No. of Students.
		Theol.	Law.	Med.	Phil.	Instr.*	Total.	
Berlin,.....	1809	11	16	35	89	8	159	2100
Bonn,.....	1818	15	10	11	48	6	90	900
Breslau,†....	1702	18	7	19	35	13	92	800
Greifswald,...	1456	7	7	9	17	5	45	200
Halle,‡.....	1694	10	6	8	38	6	68	625
Königsberg,...	1543	7	6	11	29	6	59	325

Berlin, as a whole, is far in advance of all the other Universities. Being the capital of the Kingdom, its libraries, museums, and other attractions for men of letters, are naturally larger and better than elsewhere. It is strong in all its Faculties, especially so in that of Jurisprudence; but in Theology, it is considered as standing second to Halle. As Halle is preëminent in Evangelical Theology, Breslau is in the Catholic; Bonn excels in the Faculty of Jurisprudence, Greifswald in Medicine, and Königsberg in Philosophy.

At Berlin, about one third of the students attend Law lectures, and the remainder are nearly equally divided among the three other faculties; Philosophy generally standing foremost; then Medicine, then Theology. At Bonn, the number of students in Law, also exceeds that in any other faculty. At Breslau, more than one fourth of the students belong to the Catholic Theological department. The other faculties usually number between 100 and 170 students. More than one third of the whole number of students in Greifswald, attend the Medical lectures. Half of the students at Halle are usually Theological. The Philosophical faculty at Königsberg, includes more than one third of all the students. It is usually said, in general terms that, in Berlin, one third, in Bonn, one fourth,

* In the column headed "Instructors," are included the teachers of Modern Languages, of Horsemanship, etc., etc.

† The University of Frankfort, on the Oder, was united with that of Breslau, in 1811.

‡ The University of Wittenberg, founded in 1502, was united with that of Halle in 1815.

§ As the number of the students varies from year to year, the average attendance, during several years past, is given in this table.

and in Halle, one fifth of the students are from abroad; but these proportions, as will be seen by Table IV, are somewhat over stated. In the other Universities of Prussia, the number is much smaller.

EMPIRE OF AUSTRIA.

The following information is derived from Hain's "*Handbuch der Statistik des Oesterreichischen Kaiserstaates*," recently published in Vienna. The table is based upon the returns of 1851, but the figures are sufficiently near the average for all practical purposes.

TABLE II.—AUSTRIAN UNIVERSITIES.

Location.	Date of Foundation.	Number of Professors.					No. of Students.
		Theol.	Law.	Medical.	Phil.*	Total.	
Cracow,.....	1343	4	9	14	22	49	240
Padua,.....	1228	6	10	23	21	60	1574
Pavia,.....	1361	—	9	24	16	49	1619
Pesth,.....	1465	9	11	24	27	71	419
Prague,.....	1348	10	17	49	33	109	1390
Vienna,.....	1365	9	24	47	36	116	2416
Gratz,.....	1486	7	12	—	15	34	457
Innsbruck,.....	1672	—	9	—	6	15	218
Olmütz,.....	1581	7	6	—	10	23	312
Lemberg,.....	1784	9	7	—	15	31	699

In Vienna, nearly one half of the students are in the faculty of Law; about one third in that of Medicine; while less than one twelfth are in that of Theology. At Prague more than one half are law students. Considerably more than one half at Pesth, are in the Medical faculty; while Philosophy with twenty-seven instructors, has only three students! In Pavia again, more than one half are law students. At Padua, Law and Medicine each number about one third of the students. At Cracow, the faculties of Law and Medicine, each include more than one third of all the students, while Theology has only thirteen followers. In the other Universities, law students predominate.

In the whole number of 9,546 students, there are, Germans 2,100, Slavonic 2,995, Magyar 585, Italians 3,297, Romanic 65, Jews 489, Foreigners 15.

It should be mentioned that there are ten Seminaries for Theology, distinct from the Universities, with fifty-four professors and four hundred students.

KINGDOM OF SAXONY.

Although Saxony has many excellent institutions for higher education in special branches of study, it has but one completely organized University. Hübner's "*Jahrbuch für Volks-wirthschaft und Statistik*," for 1854 gives the following information concerning it.

TABLE III.—UNIVERSITY OF SAXONY.

Location.	Foundation.	Theol.	Number of Professors.				No. of Students. (1853-4.)
			Law.	Med.	Phil.	Total.	
Leipsic,	1409	15	16	33	46	110	786

Of these 786 students, 325 were in the Faculty of Jurisprudence, 218 in Medicine, 162 in Philosophy, and 81 in Theology.

* Including at Pavia and Padua, the Mathematical Faculties which are nominally distinct.

TABLE IV.—Professors and Students in the German Universities in Summer of 1853.

Universities.	Professors.					Students.										Total No. of Foreign Students.	No. of Matriculated Students.	Total No. of Students, (Matric. and non Matric.)		
	Ordinary Professors.	Extraordinary Professors.	Honorary Professors.	Privat Doctores.	Instruction in Language and Exercise.	Theology.				Jurisprudence, Canonial, &c.		Medicine, Surgery, Pharmacy.		Philosophy, Philology.						
						Catholics.	Protestant.	Citizens.	Foreigners.	Citizens.	Foreigners.	Citizens.	Foreigners.	Citizens.	Foreigners.					
Citizens.	Foreigners.	Citizens.	Foreigners.	Citizens.	Foreigners.	Citizens.	Foreigners.	Citizens.	Foreigners.											
Vienna.....	56	15	33	10	116	194	1	30	741	3	675	42	103	5	78	1964	430	2403		
Munich.....	50	14	11	15	4	94	100	38	791	56	277	87	405	45	238	1893	...	1893		
Berlin.....	52	41	7	00	8	168	...	149	39	536	106	254	62	253	110	317	1491	675	2166	
Prague.....	37	24	23	4	88	135	4	...	465	1	204	12	111	3	28	1025	144	1169		
Bonn.....	47	13	34	6	91	202	4	47	19	248	35	86	6	153	67	126	862	34	836	
Breslau.....	30	15	34	14	92	246	3	37	1	271	3	88	6	146	5	18	806	31	837	
Leipzig.....	44	32	237	4	109	...	...	105	30	202	79	150	94	36	18	241	794	...	794
Tübingen.....	3	13	3	30	6	79	116	45	123	28	178	33	98	22	86	10	140	743	...	743
Heidelberg.....	34	12	133	11	91	...	...	49	24	77	422	48	57	9	32	836	719	39	722
Würzburg.....	30	7	1	3	5	46	91	...	186	5	103	190	118	3	207	705	...	705		
Göttingen.....	46	21	38	14	109	...	...	80	34	98	123	78	67	64	299	669	...	669	
Halle.....	35	10	19	7	71	...	...	283	51	147	14	58	7	50	6	78	616	45	661
Erlangen.....	26	10	2	4	5	47	...	132	73	131	5	63	5	15	6	90	431	...	431	
Jena.....	24	29	8	6	10	70	...	57	46	74	23	60	25	49	86	180	430	12	432	
Giessen.....	31	16	9	7	1	57	...	45	1	161	18	108	41	98	2	63	402	...	402	
Königsberg.....	30	8	16	6	60	...	...	52	...	168	...	70	4	49	4	8	347	...	347
Münster.....	10	4	3	1	18	164	23	...	...	...	...	194	17	40	17	40	328	...	328
Freiburg.....	26	1	4	7	3	181	37	...	...	51	4	32	13	15	4	58	327	29	356
Grätz.....	16	3	4	6	3	32	94	...	...	173	1	...	...	72	3	4	250	93	343
Marburg.....	30	12	14	7	62	...	...	79	7	45	...	65	19	32	7	26	327	30	347
Innsbruck.....	15	1	...	4	22	...	...	...	...	179	...	51	6	17	1	7	321	33	354
Greifswald.....	25	8	7	10	5	55	...	...	...	55	2	80	1	35	6	9	304	4	308
Olmütz.....	10	1	1	1	13	130	...	...	...	70	...	...	...	...	...	...	200	...	200
Zurich.....	19	16	16	...	51	...	...	20	35	4	76	18	22	8	30	189	16	205	
Berne.....	13	17	2	8	40	...	...	34	1	51	...	57	1	19	1	3	157	...	157
Kiel.....	17	11	...	9	6	43	...	22	...	50	3	38	4	12	...	7	132	...	132	
Rostock.....	21	3	...	7	31	...	...	15	5	49	5	19	5	9	1	16	108	...	108
Basle.....	21	3	3	12	39	...	...	51	30	6	2	5	13	2	1	46	67	?	67

TABLE V.—Whole number of students, matriculated and not matriculated, in the German Universities, during both semesters of 1853.

In Summer Term, 1853.		In Winter Term, 1853-4.	
1 Vienna.....	2403	1 Vienna.....	2584
2 Berlin.....	2166	2 Berlin.....	2204
3 Munich.....	1893	3 Munich.....	1810
4 Prague.....	1169	4 Prague.....	1218
5 Bonn.....	896	5 Bonn.....	888
6 Breslau.....	837	6 Breslau.....	807
7 Leipzig.....	794	7 Leipzig.....	807
8 Heidelberg.....	752	8 Tübingen.....	742
9 Tübingen.....	743	9 Heidelberg.....	718
10 Würzburg.....	705	10 Würzburg.....	706
11 Göttingen.....	669	11 Göttingen.....	699
12 Halle.....	661	12 Halle.....	650
13 Jena.....	432	13 Erlangen.....	473
14 Erlangen.....	431	14 Giessen.....	380
15 Giessen.....	402	15 Jena.....	380
16 Freiburg.....	356	16 Freiburg.....	376
17 Königsberg.....	347	17 Grätz.....	348
18 Grätz.....	343	18 Münster.....	330
19 Münster.....	328	19 Königsberg.....	326
20 Innsbruck.....	254	20 Innsbruck.....	278
21 Marburg.....	247	21 Marburg.....	258
22 Greifswald.....	208	22 Zurich.....	248
23 Zurich.....	205	23 Greifswald.....	222
24 Olmütz.....	200	24 Olmütz.....	203
25 Berne.....	157	25 Berne.....	175
26 Kiel.....	132	26 Kiel.....	142
27 Rostock.....	108	27 Rostock.....	111
28 Basle.....	67	28 Basle.....	102

NEW ENGLAND COLLEGES.

BY REV. J. N. TARBOK.

SECRETARY OF AMERICAN EDUCATION SOCIETY

THE following Tables have been prepared for the purpose of presenting together, the present condition of the Colleges of New England. The facts here embodied are drawn from the Catalogues of the *present year*, 1855-6.

In a subsequent number we may resume the subject, and give similar facts with reference to Colleges in other parts of the country.

TABLE I.—Colleges of New England, in the order of their Seniority, with the names of their several Presidents, the denomination to which they belong, and the number of Students in them now as compared with the number fifteen years ago, together with the whole number of graduates.

Name of College.	Where Located.	When founded.	Name of President.	Denomination.	Number of Students for year 1840-1.	Number of Students for year 1855-6.	Alumni.
Harvard College,.....	Cambridge, Mass.,	1638	Rev. James Walker, D.D., LL.D.,	Unitarian,.....	240 365	6,800	
Yale College,.....	New Haven, Conn.,	1700	Rev. Theo. D. Woolsey, D.D., LL.D.,	Congregational,.....	529 473	6,500	
Brown University,.....	Providence, R. I.,	1764	Rev. Barnas Sears, D.D.,.....	Baptist,.....	166 223	1,860	
Dartmouth College, ..	Hanover, N. H.,...	1769	Rev. Nathan Lord, D.D.,.....	Congregational,.....	341 258	4,187	
University of Vermont,	Burlington, Vt.,...	1791	Rev. Calvin Pease,.....	Congregational,.....	110 103	596	
Williams College,.....	Williamstown, Mass.	1793	Rev. Mark Hopkins, D.D.,.....	Congregational,.....	155 224	1,557	
Bowdoin College,.....	Brunswick, Maine,	1794	Rev. Leonard Woods, D.D.,.....	Congregational,.....	165 186	1,151	
Middlebury College,...	Middlebury, Vt.,...	1800	Rev. Benjamin Labaree, D.D.,.....	Congregational,.....	46 75	940	
Waterville College,...	Waterville, Maine,	1830	Rev. Robert E. Pattison, D.D.,.....	Baptist,.....	65 66	267	
Ambert College,.....	Ambert, Mass.,...	1821	Rev. William A. Stearns, D.D.,.....	Congregational,.....	157 218	1,147	
Trinity College,.....	Hartford, Conn.,...	1824	Rev. Daniel R. Goodwin, D.D.,.....	Episcopal,.....	80 72	506	
Wesleyan University,...	Middletown, Conn.,	1831	Rev. B. P. Edmunds, S. James, D.D.,.....	Methodist,.....	133 116	501	
Norwich University,...	Norwich, Vt.,.....	1834	Rev. Edward Bourne, LL.D.,.....	Episcopal,.....	83		
Tufts College,.....	Somerville, Mass.,	1855	Rev. Hosea Ballou, 2nd, D.D.,.....	Universalist,.....	32		
Total Alumni,.....						25,812	

TABLE III.—In the following table, the undergraduates connected with the several New England Colleges are assigned to the States and Territories from which they came.

	Alabama.	Arkansas.	California.	Connecticut.	Delaware.	Florida.	Georgia.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maine.	Maryland.	Massachusetts.	Michigan.	Minnesota.	Mississippi.	New Hampshire.	New Jersey.	New York.	North Carolina.	Ohio.	Pennsylvania.	Rhode Island.	South Carolina.	Tennessee.	Texas.	Vermont.	Virginia.	Wisconsin.	Dist. of Columbia.	Canada.	Other Countries.	Total.
Amherst College	0	0	0	15	0	0	0	4	0	3	0	1	6	0	113	1	0	0	34	20	0	2	5	9	0	0	1	10	1	0	1	0	1	218	
Bowdoin College	0	0	0	0	0	0	0	0	0	1	0	1	154	0	70	0	1	1	18	0	1	18	0	0	0	0	0	0	0	0	0	0	2	186	
Brown University	0	0	0	12	10	4	21	0	3	0	4	65	1	0	16	12	0	16	9	68	0	10	1	1	1	1	1	1	1	1	1	1	223		
Dartmouth College	0	0	0	30	1	30	1	21	0	11	0	49	1	0	41	29	0	2	6	5	100	0	0	0	0	0	0	0	0	0	0	0	258		
Harvard College	2	0	0	0	0	0	3	0	10	3	5	10	258	0	3	0	28	18	1	1	5	6	35	0	0	0	0	0	0	0	0	0	365		
Middlebury College	0	0	0	20	0	0	0	0	0	0	0	0	20	0	0	9	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	75			
Norwich University	1	0	0	0	1	0	0	0	0	0	0	0	1	11	0	25	2	0	8	5	0	1	1	2	1	0	0	0	0	0	0	83			
Trinity College	0	0	0	22	0	0	0	0	0	0	0	0	2	30	0	0	14	4	2	3	3	2	0	1	1	1	1	1	1	1	1	72			
Tufts College	0	0	0	0	0	0	0	0	0	0	0	0	8	10	0	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	39			
University of Vermont	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10	0	0	12	1	0	1	0	1	0	0	0	0	0	0	0	0	103			
Waterville College	0	0	0	0	0	0	0	0	0	0	0	0	54	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	63			
Wesleyan University	1	0	0	22	0	0	0	0	0	0	0	0	4	0	24	0	0	35	9	6	0	1	4	3	0	0	0	0	0	0	0	116			
Williams College	0	0	0	15	0	0	0	2	0	1	0	0	0	69	2	0	2	79	2	6	0	9	0	0	0	0	0	0	0	0	0	12	224		
Yale College	1	0	1	125	0	1	3	6	0	1	11	2	5	5	522	6	13	117	6	12	0	22	45	2	1	1	9	3	1	1	5	473			
Total	5	0	1	217	3	21	118	5	8	20	23	262	17	682	9	11	15	360	233	28	107	739	92	81	6	4	3	23	9	8	71	16	25	2496	

TABLE IV.—Proportion of undergraduate students, from the several New England States, in the above named Colleges, according to the population of these states, as given in the census of 1850.

	Population.	Students.	One Student to—
New Hampshire,	317,976	233	1,364 inhabitants.
Vermont,	314,120	223	"
Massachusetts,	994,514	692	1,458 "
Connecticut,			
Rhode Island,			
Maine,			
Population.	370,792	217	1,708 inhabitants.
Students.	147,545	81	1,821 "
One Student to—	583,169	292	2,925 "

Alabama	5
Arkansas	0
California	1
Connecticut	217
Delaware	3
Florida	3
Georgia	11
Illinois	12
Indiana	16
Iowa	15
Kentucky	20
Louisiana	23
Maine	262
Maryland	17
Massachusetts	682
Michigan	9
Minnesota	11
Mississippi	11
Missouri	12
New York	350
New Hampshire	238
New Jersey	59
North Carolina	10
Ohio	73
Pennsylvania	92
Rhode Island	72
South Carolina	81
Sweden	4
Tennessee	6
Texas	3
Vermont	223
Virginia	3
Wisconsin	6
Dist. of Columbia	7
Canada	16
England	3
Scotland	1
Switzerland	1
Sweden	1
Denmark	1
West Indies	1
South America	1
Turkey	1
Austria	1
Yucatan	1
Prussia	1
Nova Scotia	1
Greece	1
New Brunswick	1

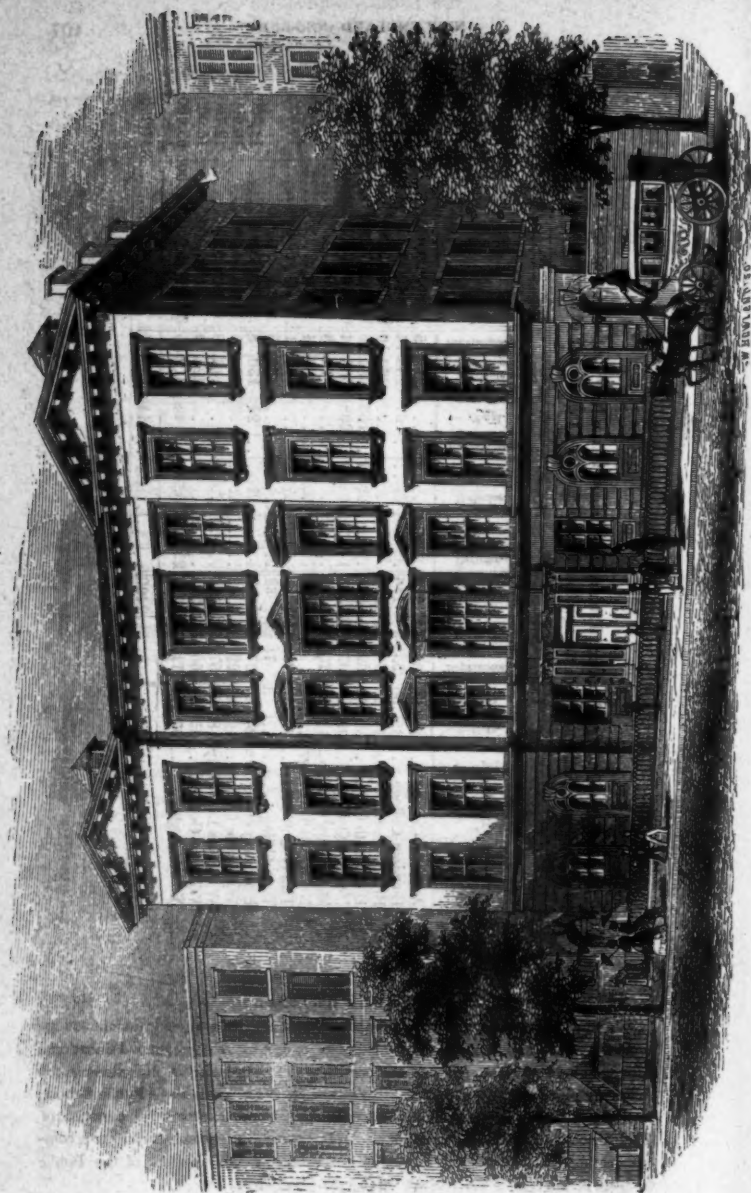
TABLE II.—Undergraduate and Professional Students in the New England Colleges, as given in their latest published catalogues, with the number of Instructors, and the number of volumes in their Libraries.

NAME OF COLLEGE.	Undergraduate.					Professional.					Libraries.				
	Books.	Juniors.	Sophomores.	Freshmen.	Total.	Divinity.	Law.	Medicine.	Science.	Special Courses.	Total Under- Professors and Instructors.	Colleges.	Residence.	Professional and Special.	Total.
Amherst College.....	49	50	65	54	218	..	..	..	..	..	218 15	11,000	9,000	.....	30,000
Bowdoin College.....	35	56	53	42	186	..	..	67	..	..	253 14	13,000	11,250	3,400	27,650
Brown University.....	31	54	64	74	223	..	..	..	..	..	223 10	28,000	6,000	.....	34,000
Dartmouth College ..	59	70	69	60	258	..	..	62 41	..	..	361 20	14,500	17,500	1,600	33,600
Harvard College	93	69	103	100	365	14	111	104 69	..	..	663 44	65,000	13,000	20,100	98,100
Middlebury College	13	21	23	18	75	..	..	..	..	..	75 8	6,400	.....	.....	6,400
Norwich University ..	..	..	..	..	83	..	..	..	..	..	83 4	1,800	.....	.....	1,800
Trinity College.....	19	16	21	15	72	..	..	..	..	..	72 11	5,000	6,000	.....	12,000
Tufts College	3	7	22	32	103	..	..	..	..	..	32 5	.....	.....	.....	.....
University of Vermont	24	22	33	24	103	..	27	..	..	3	130 8	11,000	3,000	.....	14,000
Waterville College...	19	20	22	12	63	..	..	..	..	..	66 5	5,500	4,500	.....	10,000
Wesleyan University..	18	30	37	31	116	..	..	..	..	..	116 8	6,500	6,200	.....	12,700
Williams College.....	45	56	66	57	224	..	..	..	..	..	224 9	8,000	.....	.....	16,000
Yale College	97	111	111	154	473	25	26	32 63	..	..	619 45	33,000	25,000	5,000	63,000
Total.....	..	..	..	..	2490	..	..	..	..	..	644 3133	..	..	..	347,250

* Classes not given.

DEFERRED ARTICLES

We must postpone to our next number several articles and communications intended for this, together with many statistics and notices respecting Educational Movements in different parts of our country. For the sake of introducing the following plans of the edifice recently opened in New York for a Public School, exclusively for Girls, we shall also abridge the space set apart for a notice of EDUCATIONAL JOURNALS AND BOOKS. These plans were accompanied by a communication from Professor Elias Loomis, giving a brief history of the Public Schools in the city of New York, which we shall insert hereafter.



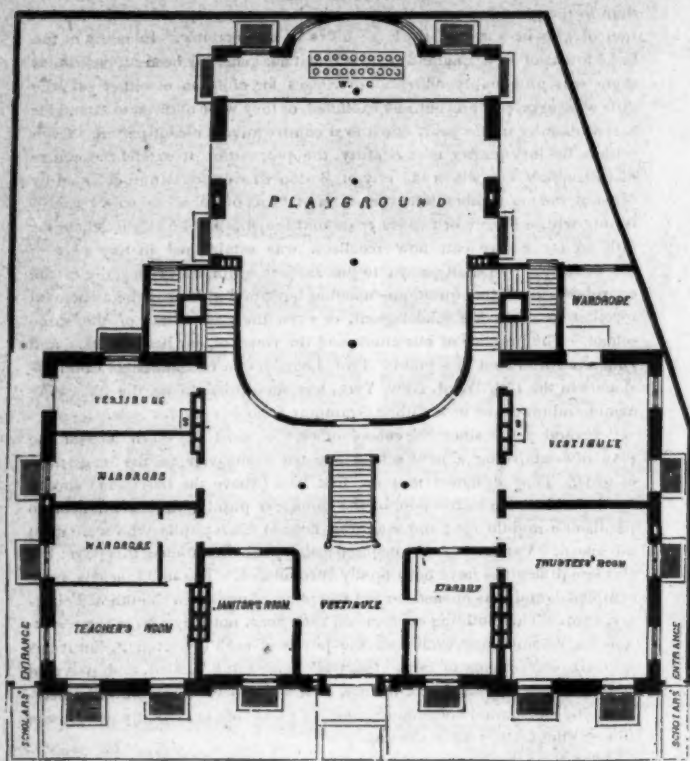
In no one direction is the progress of public instruction more evident than in the provision now made or which is now proposed for the education of girls in a few of the large cities of our country. In many of the large towns of New England even, where it has generally been supposed that there was an equality of school privileges for children of either sex, the girls were expressly and entirely excluded, or they were allowed to attend for a few months in the year, down to a comparatively recent period. Even within the last quarter of a century, the proposition to extend the course of instruction for girls in the city of Boston was opposed and defeated by some of the most influential citizens and friends of public schools. And it is only within fifteen or twenty years that the first Public High School for girls so far as we can now recollect, was established in any part of the country. We shall return to this subject again, and especially to the consideration of the question—whether boys and girls shall be associated together in the same school-room, or even the class-rooms of the same school. The practice of our cities, and the views of our best teachers and educators differ on this point. Prof. Loomis, one of the School Commissioners in the 15th Ward, New York, has forwarded to us the following memorandum of the new Public Grammar School-house for girls.

"Several years since the school officers of the 15th Ward formed the plan of establishing a new school devoted exclusively to the instruction of girls. They designed that the first floor (above the basement) should be devoted to the instruction of the youngest pupils; the second floor to pupils of a middle age; and the upper floor to those pupils who were most advanced. Various causes conspired to delay the execution of this plan; but all these difficulties have been finally surmounted. The building has been completed and was opened for the reception of pupils on the 6th of February, 1851. This building contains on each floor, not only a large room suitable for assembling together all the pupils of each department, but it has also six class-rooms of large size, well lighted and heated, and provided with convenient seats, black-boards, etc. In respect to convenience, neatness, and substantial accommodations, this building is certainly not inferior to any school-building in the city.

After the arrangements for erecting a new school-building in the 15th Ward had made considerable progress, another was commenced in the 18th Ward, also designed exclusively for the reception of girls, and this school went into operation in Sept., 1855. These are the only Ward Schools which do not admit both boys and girls in the same building. It may perhaps be premature to anticipate what will be the verdict of the public, respecting the policy of assigning the two sexes, to separate school-buildings, but it seems not improbable that it may result in our having one set of schools exclusively for boys, and another exclusively for girls."

The building represented in the following plans is one of the best specimens of School Architecture in the country. The arrangements for ventilation are not as perfect as they might have been made. The plan of one large hall and several large class-rooms on the same floor, will admit of the scholars being distributed into several classes, with an assistant for each class-room, or of being kept under the immediate management of the principal, and sent out for recitation to several class-rooms.

Fig. 2. GROUND FLOOR.



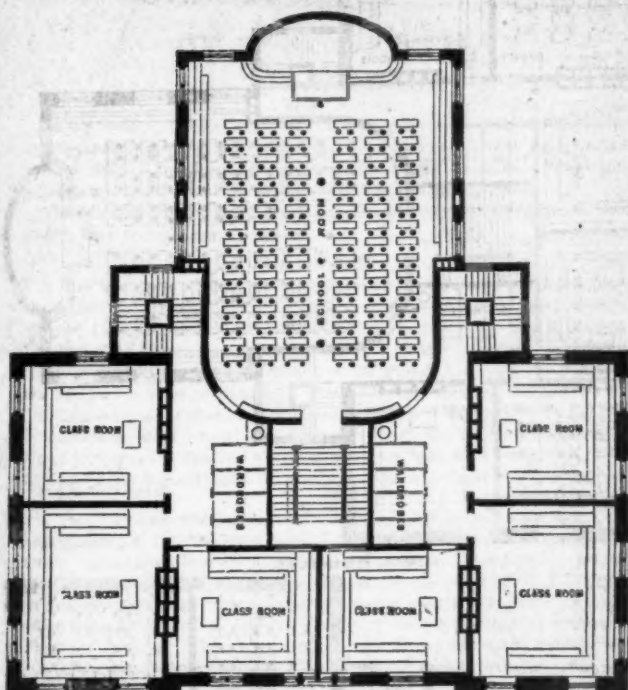
PLANS OF GRAMMAR SCHOOL-HOUSE, No. 47, NEW YORK CITY.

The elevation represents the new School-house erected in Twelfth Street, between Broadway and University Place, for a Grammar School for girls. The building has a front of 94 feet, and is 100 feet deep and 4 stories high. It is built of brick, the basement having a brown stone front, well finished, with an excellent architectural effect.

Figure No. 2, is the ground floor, chiefly occupied as the play-ground for the scholars, extending under nearly the whole building, and protected from the weather by doors and walls. In fine weather the doors being thrown open, ample room is afforded for exercise.

The lettering in the plan will enable the reader to see at once the arrangement of the rooms. At the right is the Library and the rooms for the meetings of the School Officers of the Ward. At the left are rooms for the Teachers, and the Janitor, and Wardrobes for the use of the pupils. The water-closets are at the rear part of the building.

Fig. 3. FIRST FLOOR.



There is a cellar under the whole building, where fuel is stored, and the furnaces are placed. Of these there are five, constructed by Messrs. Culver, Simonds & Co., of New York.

The first story is occupied by the Primary Department, and has six class-rooms, as represented in Fig. 3, beside the large room, where the pupils assemble at the opening and close of the school. Four wardrobes are placed on each side of the stairway, where the outer clothing of the scholars are hung during school hours. The stairways on each side of the house, afford an egress into the play-ground.

The second story, Fig. 4, is the same as the first, except that two of the class-rooms are supplied with desks for the upper classes.

The third story, represented in Fig. 5, is the same, with the exception that all the class-rooms are furnished with desks. This department is for the highest grade of scholars, and is similar, in all its arrangements with respect to wardrobes, &c., to the other departments.

The whole house is furnished with the School Furniture of Joseph L. Ross, and is very handsomely and conveniently arranged for the accommodation of the pupils.

The building was erected under the supervision of Thomas R. Jackson, architect; the mason-work being performed by Wm. B. Rhoades, and the carpenter's work by Powers & Schoonmaker.

Fig. 4. SECOND FLOOR.

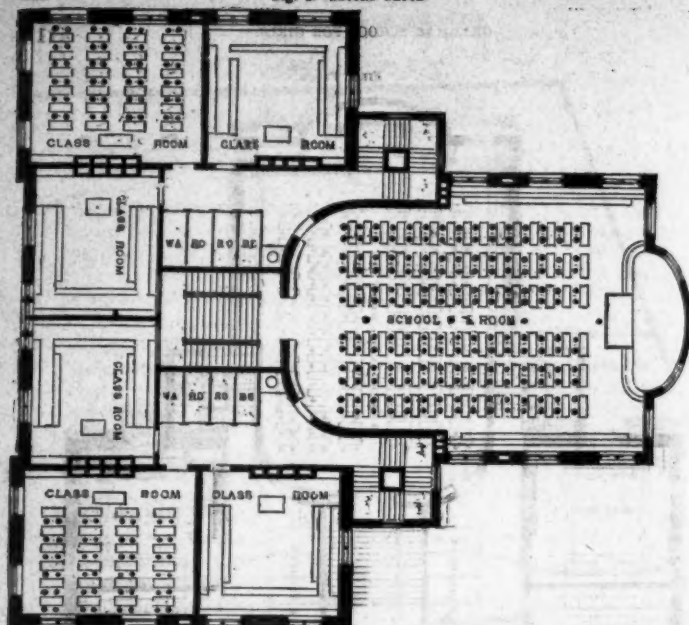
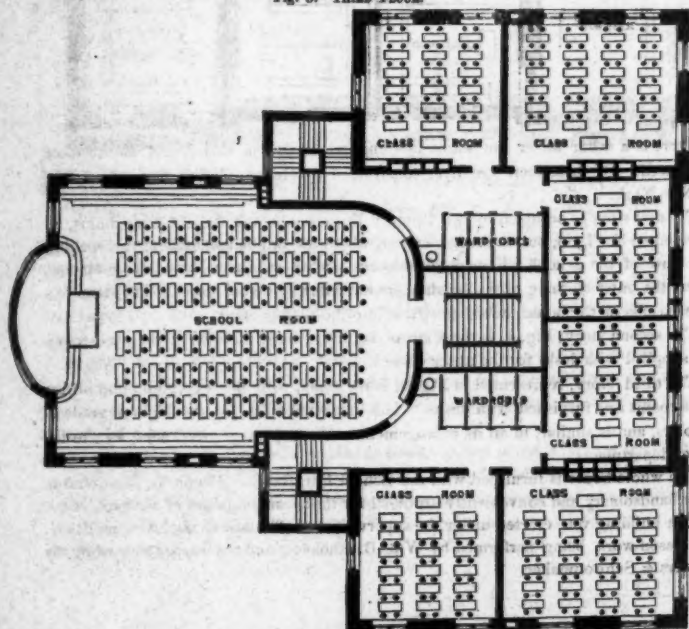


Fig. 5. THIRD FLOOR.



XVIII. EDUCATIONAL JOURNALS.

As the Pedagogical Journals of different countries now hold an important place in educational literature, it is proposed to notice from time to time the contents of such of them as may be received at the office of this magazine. Occasionally extracts and translations from their pages will be given in our own.

The following periodicals, of which only the more important articles are mentioned, have recently been received.

GERMAN.

1. DIE HOEHERE BURGERSCHULE; *Organ der Real, hoehere Burger, und Tochter Schulen in Deutschland.* Herausgegeben von Dr. Carl Vogel (Leipsic,) und Fr. Korner, (Halle.) CONTENTS. (Vol. IV. Nos. 7 & 8. Oct. and Nov., 1855. Leipsic.) The following are the most interesting articles in the last numbers of this journal. No. 7. On the acquisition of the French Language; By Robolsky. On the Study of the Geography of Plants; By Dr. Rudolph, Berlin. On the distribution among teachers in Real Schools of topics of Instruction; By Clemens. Botanical excursions. Latin in Real schools. No. 8. Report of the Seventh meeting of Instructors in the Real schools of Germany, held at Hanover, Sept., 1855. Remarks on the higher Burgher schools in Pomerania. On Instruction in Drawing, etc.

2. DER DEUSCHE SCHULBOTE; *eine katholisch-padagogische Zeitschrift.* Herausgegeben von Dr. Mauritius Moritz. (Vol. XIV. Nos. 2 and 3. Augsburg. 1855.) CONTENTS. How can a love of truth be awakened in children? What is meant by breaking the will of a pupil? Character and object of Church Music. Of Offences to Children. Six years' school time on work days too little, six years' school time on holidays too much. History of the popular School System of France. Drawing in Popular Schools. Natural History in Popular Schools, etc.

3. SACHSISCHE SCHULZEITUNG. Redacteur A. Lansky. Dresden. (Nos. 40, 41, 42, 43. Oct., 1855.) CONTENTS. Catechismal Instruction. Laying the cornerstone of a new Normal School Building at Bautzen, and of a City School Building at Meissen. Book Notices. Intelligence, etc.

4. ALLGEMEINE SCHUL ZEITUNG. Redactoren, Drs. Wagner und Zimmermann. (Darmstadt. Oct. & Nov., 1855.) CONTENTS. Report of the meeting of Real School Teachers, Hanover, Sept., 1855. Report of the annual meeting of German Philologists. On Song. Penmanship. Orthography of the German Language. Upon the treatment of Old Testament History in Popular Schools. Institution for Idiots at Gohlis. Reviews and Notices of Educational Books. Intelligence, etc., etc.

5. ZEITSCHRIFT FÜR ERZIEHUNG UND UNTERRICHT. Herausgegeben von P. J. Waags. (Vol. IV. Nos. 5 and 6. Cologne and Neutz. 1855.) CONTENTS. School Knowledge—(an inquiry suggested by the new Prussian Regulations.) Elementary Instruction in Arithmetic. On Instruction in Vocal Music. The Organ. Official Intelligence, etc.

FRENCH.

REVUE DE L'INSTRUCTION PUBLIQUE. *Recueil Hebdomadaire.* (Paris, Sept. and Oct., 1855.) CONTENTS. Distribution of Prizes in the departmental Colleges and Lycea of France. Report of the annual sitting of the French Academy. Meetings of Learned Societies. Public Instruction in North America. Necrology. Educational Intelligence. Official announcements of the Ministry of Public Instruction. Book Notices, etc., etc.

ENGLISH.

THE RAGGED SCHOOL UNION MAGAZINE. (Vol. VII. London. 1855, pp. 244.) This volume contains more than the usual number of important articles, pertaining to the history and management of Ragged Schools in England and Scotland. The passage by Parliament, within the past year, of the Religious Worship Bill, the Youthful Offenders' Bill, and the Education of Out-Door-Paupers' Bill, has had a marked influence upon all plans for the prevention and reformation of juvenile delinquency. A series of five articles on the Scottish Ragged Schools is deserving of special notice.

THE ENGLISH JOURNAL OF EDUCATION AND EDUCATIONAL EXPOSITOR. January 1, 1856. Published by Groombridge and Sons. London. This Number commences the Tenth Volume of the New Series of the Journal and the Fourth Volume of the Expositor. 52 pages. The United Journal is edited by T. Tate, and J. Tilleard, assisted by eminent Teachers and Friends of Education. The Editors are widely known and highly esteemed by their success as practical teachers, and by their publications. Both were connected with the Battersea Training School while under the auspices of Sir James Kay Shuttleworth, and afterward with Kneller Hall Training School. **CONTENTS.** (No. 1.) A New System of Decimal Weights and Measures. Solution of Arithmetical Puzzles. Industrial Schools. On the Study of the Anglo-Saxon Language, [reprinted from the American Journal of Education.] Local Words. Martial with Translations. Arithmetical Notes and Queries. Topographical Nomenclature. Hints for Scripture Lessons. Reading Books. Regnaults on the Latent Heat of Steam. Discipline Rediviva, on reference to Study of Moral Philosophy. Notes of New Books. [In which Jones' Theory and Practice of Notes of Lesson is reviewed, and Blow's Translation of the Agamemnon of Rochylus.] Intelligence. [Under this head is noticed the annual meeting of the United Association of Schoolmasters for 1855, which now numbers 250 members. Monthly meetings are held in London or its neighborhood for the reading of Papers and giving Model Lessons.]

PAPERS FOR THE SCHOOLMASTER. 4 vols. Nos. 1-48. Published Monthly by Simpkin, Marshall & Co. London. Price 2½ pence a number. This Periodical is meant to give practical help to masters, mistresses, and pupil-teachers in Elementary Schools. It abounds in "Notes of Lessons," and the details of instruction as pursued in the best National Schools. We shall notice the numbers as they are received.

THE SCOTTISH EDUCATIONAL AND LITERARY JOURNAL, issued by the Educational Institute of Scotland—No. 37: Vol. III.; for October, 1855. 32 pages. Free to members of the Institute, and 4d. for any single number, or 4s. for twelve numbers annually. Edinburgh: Sutherland & Knox. The Institute is an incorporated body, and includes many of the oldest and ablest teachers of Scotland. **CONTENTS.** Review of Tennyson's Maud; Specimens of Examination Papers, [including Paidentics, or the Theory and Practice of Teaching.] Correspondence. Educational Intelligence, [General Meeting of the Trustees of the Burgh and Parochial Schoolmasters' Widows' Fund. The Fund amounts to £76,000.]

AMERICAN.

We must omit all notices of the American Periodicals which have been sent to our address. We will introduce them in our next number with a History of Educational Journalism in the United States—having, we believe, got nearly complete sets of all the Educational Periodicals which have been published in this country.

XIX. BOOKS AND PAMPHLETS RELATING TO EDUCATION.

HACHETTE'S EDUCATIONAL DEPOSITORY, PARIS. One of the largest establishments in the world devoted to the publication and sale of Educational Books and apparatus is that of Messrs. L. HACHETTE & Co., No. 14 Rue Pierre Sarazin, near the School of Medicine, in Paris. There is scarcely any thing wanted in a school, from the crayon or the infant school pictures up to the most learned books for professional schools, which may not be here obtained.

The mere catalogue of stock, lately issued by this house, numbers nearly two hundred pages, and is eminently suggestive of educational conveniences and necessities. Most of the books which they offer are their own publications, and the apparatus is generally made under their own supervision. The official approval of the Council of Public Instruction in France having been given to a large number of works, has secured for them an immense sale; which, on the other hand, has enabled the price to be fixed at a very low figure.

The catalogue commences with books, tablets, pictures and registers, intended for Infant Schools. Next follow the books which are employed or have reference to primary instruction, including the laws which concern, and the books needed for the education of instructors in schools of this grade, as well as text-books for primary scholars. Lists of special works for professional education then follow. The department of Superior education succeeds, with lists of works on Legislation, Statistics and Pedagogics, Programmes and Manuals for various examinations, Text-Books in French on every branch of science, choice editions of the Greek and Latin Classics, selected writings of modern authors in different languages, &c.

The catalogue of apparatus is not less complete than that of books. Stationery conveniently assorted, colors, boxes of mathematical instruments, linear measures and those of capacity, instruments for surveying and leveling, geometrical solids and reliefs, apparatus for the complete illustration of the laws of mechanics and physics; retorts, lamps, &c., for chemical experiments; collections of minerals, crystals, fossils, chemicals, plants, zoological preparations, &c., are provided of a superior quality and at low prices.

Owing to the difference in language the publications of Messrs. Hachette & Co. will meet with but a limited sale in this country; but their apparatus, and especially their collections in Natural History are deserving of importation on a very large scale. From a personal examination of what they offer to the public, we confidently recommend those who are purchasing for educational establishments in this land to make selections from this well chosen and well prepared assortment. We likewise call the attention of the educational Book Trade to the same full catalogue.

MA BIBLIOTHIQUE FRANÇAISE. (Paris: Hector Bossange et Fils. New York: 153 Broadway. 16mo., pp. 480. 1855.) The rare biographical attainments of Mons. Bossange are well known to the Librarians and Scholars of this country. Although with characteristic modesty he says of the volume before us, "It is not a book, it is not even a catalogue, it is simply a compendium of information for the use of my friends in America," we do not hesitate to express the opinion that within the same compass so much valuable detail in regard to the publications and writers of France, can no where else be found.

The value of Mr. Bossange's publication is by no means limited to the well-chosen list of books which he presents. His biographical and bibliographies; Notes display a wide range of research, and what is not less important great judiciousness in the selection and arrangement of material.

LEARNING AND WORKING. Six Lectures delivered in Willis's Rooms, London in June and July 1864, in exposition of the Workingmen's College, by F. D. Maurice, M. A., Chaplain of Lincoln's Inn, Cambridge. Macmillan & Co., 1865, 350 pages.

THE SPIRIT AND SCOPE OF EDUCATION IN PROMOTING THE WELL-BEING OF SOCIETY. From the German of The Very Rev. J. A. Stapf, D. D., Prof. of Moral Theology by Robert Gordon. Charles Dolman. London: 376 pages.

GERMAN LETTERS ON ENGLISH EDUCATION, by Dr. L. Wiese, Prof. in Royal Foundation School at Jorchimsthal, 1854. London: Longman, 209 pages.

THE PHILOSOPHY OF EDUCATION: or The Principles and Practice of Teaching, in five parts, by T. Tate, F. R. A. S. London: Longman, Brown, Green, and Longmans, Paternoster Row. 1864. 162 pages.

SCHOOL ECONOMY. A Practical Book on the best modes of Establishing and Teaching schools, and of making them thoroughly useful to the Working Classes by means of Moral and Industrial Training; by Jellinger Symons, A. B. London: John W. Parker and Son, West Strand. 1864. 188 pages.

MANUAL OF METHOD; for the use of Teachers in Elementary Schools; by W. F. Richards, Head Master of the National Society's Central School, Westminster. London: National Society's Depository, Sanctuary, Westminster. 1854. 141 pages.

A HAND BOOK TO THE BOROUGH ROAD SCHOOLS. Explanatory of the methods of instruction adopted by the British and Foreign School Society. London: Printed for the Society and sold at the Depository, Borough Road. 1854. 148 pages.

SOUGHT AND SAVED. A prize Essay on Ragged Schools, and Kindred Institutions; by George James Hall, M. A., London, Ragged School Union. 1. Exeter Hall. 1854. 256 pages.

REPORT OF TWENTY-ONE YEAR'S EXPERIENCE OF THE DICK BEQUEST, for elevating the character and position of the Parochial Schools and Schoolmasters in the Counties of Aberdeen, Banff, and Moray, embracing an exposition of the design and operation of the parish school. Presented to the Trustees by Allan Menzies. William Blackwood and sons; Edinburg and London: 1854. 476 pages.

INTRODUCTORY LECTURES, Delivered at Queen's College for Young Ladies, London. London: John W. Parker, West Stand. 352 pages.

THE UNIVERSITIES OF SCOTLAND, PAST, PRESENT AND POSSIBLE, with an appendix of Documents relating to the Higher Instruction; by James Lorimer, Jr., Esq. Edinburg; W. P. Kenedy. 1854. 152 pages.

SECOND REPORT OF THE DEPARTMENT OF SCIENCE AND ART. Presented to both Houses of Parliament. London: 1855. 258 pages.

THE TWENTIETH REPORT OF THE COMMISSIONERS OF NATIONAL EDUCATION IN IRELAND for the year 1858. Presented to both Houses of Parliament. Dublin: 1855. 790 pages.

THE TWENTY-FIRST REPORT OF THE COMMISSIONERS OF NATIONAL EDUCATION IN IRELAND for the year 1854. Presented to both Houses of Parliament, Dublin. 1855. 936 pages.

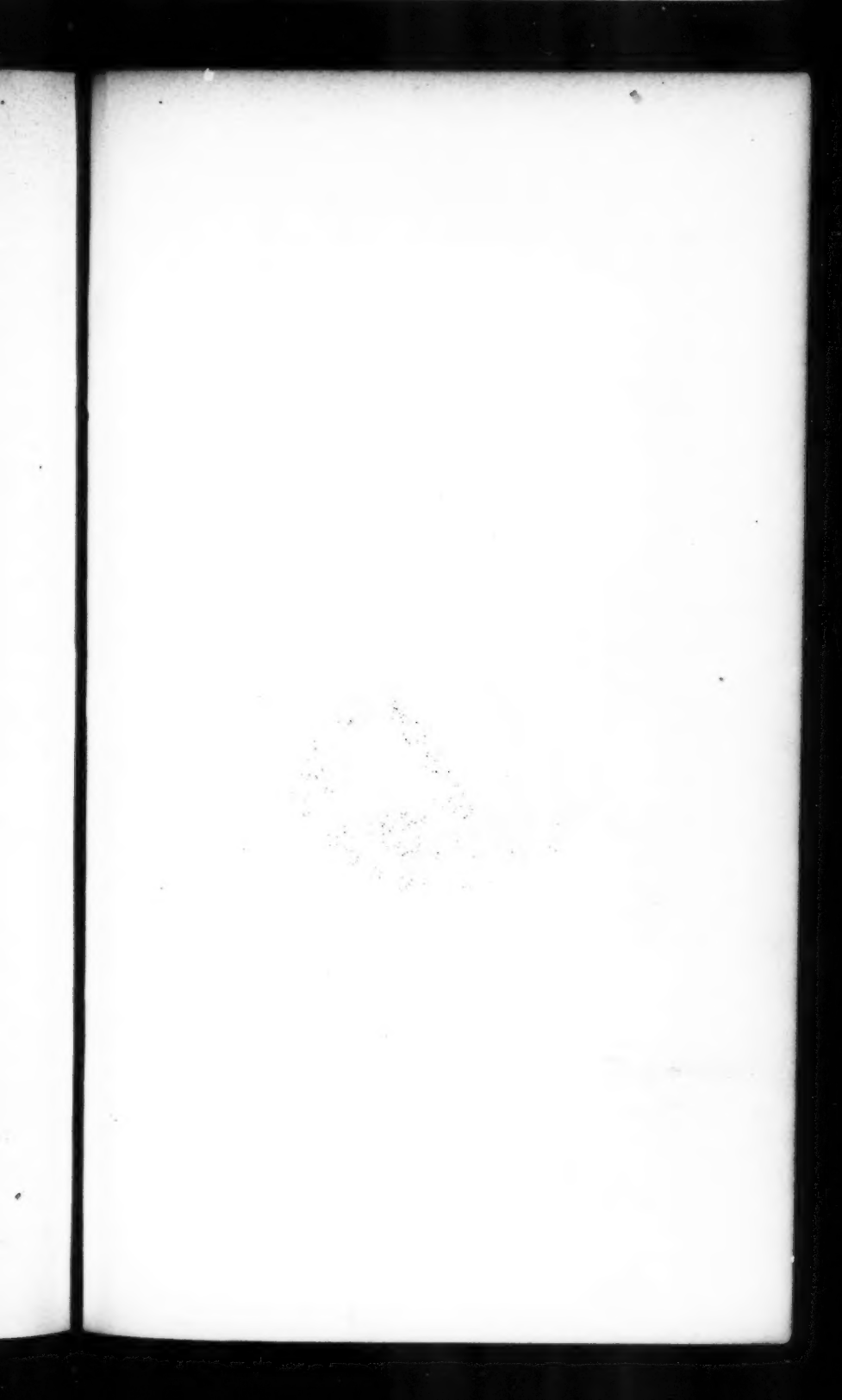
PRACTICAL WORKING OF THE SYSTEM OF NATIONAL EDUCATION IN IRELAND: Report from the Select Committee of the House of Lords, together with the Minutes of Evidence, Appendix and Index, 2 vol., folio, 1652 pages.

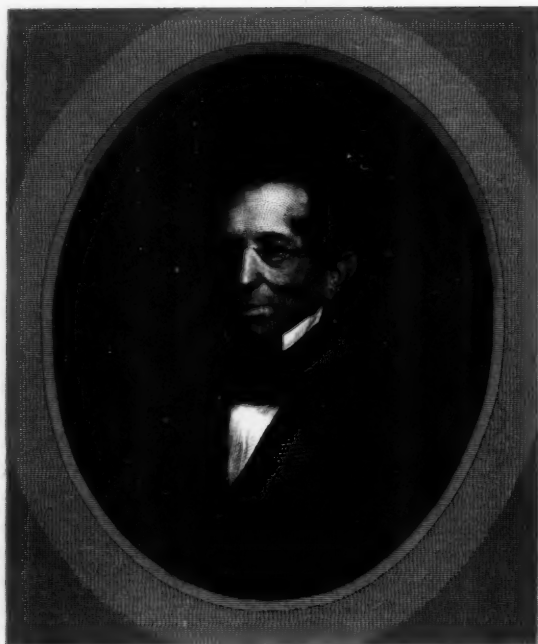
A REVIEW AND COMPENDIUM OF THE MINUTES OF EVIDENCE taken before the Select Committee of the House of Lords, on the Practical Working of the System of National Education in Ireland, &c.; edited by an Advocate of Lord Stanley's Plan. London: Groombridge and Sons. 644 pages.

MINUTES OF THE COMMITTEE OF PRIVY COUNCIL ON EDUCATION, Correspondence, Statistics, and Reports of Inspectors for 1854-6. London: 1855. 966 pages.

ERRATA.

In a few impressions the following errors and omissions have been noticed: On page 384 (11th line from the bottom,) *cents* should read *dollars*; and on page 348, (17th line from the top,) 41,400, should read 414,000, and in the next line, \$280.00 should read \$28,000. On page 370 a paragraph explanatory of Table V., and the proper heading of the Table (VI.) devoted to Public Libraries in Europe, which is taken, by permission, from Burritt's Statistics of the Nations, are omitted.





Trin Sincerely,
J. H. Gallaudet —

